SUPREME COURT OF THE UNITED STATES NO. 141, ORIGINAL STATE OF TEXAS, Plaintiff, VS. VS. VOLUME II STATE OF NEW MEXICO AND STATE OF COLORADO, Defendants. Defendants.

TRANSCRIPT OF PROCEEDINGS

The above-entitled matter came on for HEARING before HONORABLE MICHAEL A. MELLOY, SPECIAL MASTER, held REMOTELY via Zoom, on OCTOBER 5, 2021, commencing at 11:00 a.m.;

Proceedings reported by Certified Shorthand Reporter and Machine Shorthand/Computer-Aided Transcription.

1	REMOTE APPEARANCES
2	
3	FOR THE PLAINTIFF STATE OF TEXAS:
4	Ms. Sarah A. Klahn
	SOMACH SIMMONS & DUNN
5	2701 Lawrence Street, Suite 113
	Denver, Colorado 80205
6	(720) 279-7868
	sklahn@somachlaw.com
7	
8	FOR THE DEFENDANT STATE OF NEW MEXICO:
9	Mr. Jeffrey Wechsler
1.0	MONTGOMERY & ANDREWS
10	325 Paseo De Peralta
11	Santa Fe, New Mexico 87501 (505) 986-2637
	jwechsler@montand.com
12	Jwechsteremoneand.com
	-and-
13	ana
	Ms. Lisa M. Thompson
14	TROUT RALEY
	1120 Lincoln Street, Suite 1600
15	Denver, Colorado 80203
	(303) 861-1963
16	lthompson@troutlaw.com
17	
	FOR THE DEFENDANT STATE OF COLORADO:
18	
1.0	Mr. Chad Wallace
19	COLORADO DEPARTMENT OF LAW
20	1300 Broadway, 7th Floor
∠∪	Denver, Colorado 80203 (720) 508-6281
21	chad.wallace@coag.gov
22	chad.wallace@coag.gov
23	
24	
25	

```
1
     FOR THE UNITED STATES:
 2
         Mr. James J. Dubois
         U.S. DEPARTMENT OF JUSTICE
 3
         999 18th Street, Suite 370
         Denver, Colorado 80202
 4
         (303) 844-1375
         james.dubois@usdoj.gov
 5
         -and-
 6
         Ms. Jennifer A. Najjar
7
         U.S. Department of Justice
         Post Office Box 7611
 8
         Washington, DC 20044
         (202) 514-3553
         jennifer.najjar@usdoj.gov
9
10
11
12
13
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1 JUDGE MELLOY: Good morning, everyone. 2 This, of course, is in Are we ready to get started? 3 the matter of United States Supreme Court Original No. 4 I'd ask the attorneys who are going to be 5 participating today to enter their appearance, please. 6 MS. KLAHN: Good morning, Your Honor. 7 This is Sarah Klahn for the State of Texas. 8 JUDGE MELLOY: All right. 9 MR. DUBOIS: Good morning, Your Honor. 10 This is James Dubois for the United States of America. 11 and also later today when we -- if and when we switch 12 witnesses, Ms. Jennifer Najjar will also be appearing. 13 MR. WECHSLER: Your Honor, Jeff Wechsler 14 for the State of New Mexico, and with Ms. Spener, 15 it'll be Lisa Thompson. 16 JUDGE MELLOY: Okay. And --17 MR. WALLACE: Good morning, Your Honor. 18 This is Chad Wallace for the State of Colorado. 19 JUDGE MELLOY: All right. Well, what 20 I'm going to do today is I -- I think we'll just start 21 in on the cross-examination. We do have some issues 22 that need to be resolved as -- as to the exhibit 23 protocols, and there's some issues that have come up, 24 but I'm going to hold off on that and just start in on 25 the cross-examination, see how far we get, and at some

1 point, we will be talking about exhibits. But let's 2 get started on the cross-examination of 3 Ms. Estrada-Lopez. So who ever is responsible for 4 getting her on the screen. 5 MR. DUBOIS: There we are. 6 JUDGE MELLOY: Okay. Ms. Estrada-Lopez, 7 let me remind you that you're still under oath, and 8 I'll just ask you briefly again, anyone in the room 9 with you? 10 THE WITNESS: No, there's not. 11 JUDGE MELLOY: And anyone have -- do you 12 have any materials with you, other than the exhibits 13 that have been admitted into evidence? 14 THE WITNESS: No, I do not. 15 JUDGE MELLOY: All right. Then, 16 Mr. Wechsler, you may proceed. 17 MR. WECHSLER: Thank you, Your Honor. 18 MICHELLE ESTRADA-LOPEZ, 19 having been previously duly sworn, testified further 20 as follows: 21 CROSS-EXAMINATION 22 BY MR. WECHSLER: 23 Good morning, Ms. Estrada-Lopez. 0. 24 Α. Good morning, Jeff -- or Mr. Wechsler. 25 You're welcome to call me Jeff. 0.

probably use Ms. Estrada-Lopez. I tend to be formal. Unfortunately, I have a lot of questions for you, in part because you're the first witness, but let me start by saying that during discovery, you were designated as an expert to discuss the 2011 credit water release; is that correct?

A. Yes.

- Q. But you were not offered as an expert yesterday?
 - A. No.
- Q. Do you recall being asked at your deposition what you plan to testify if called as a witness?
- A. I don't remember exactly, but it sounds right.
- Q. Do you recall that your answer was you plan to testify about the matters in your report, meaning your disclosure, but nothing else?
- A. I don't recall.
- Q. We don't need to go any further into that.

 Turning a little bit into your background, do you

 first recall working on Rio Grande issues in 2012; is
 that right?
 - A. That sounds correct.
- Q. So you wouldn't have been working on those Rio Grande issues in 2011?

1	A. That's correct. I did not.
2	Q. You offered some testimony about the Compact,
3	the engineer advisors, and the Rio Grande Compact
4	Commission; do you recall that?
5	A. Yes.
6	Q. But you have never worked as an engineer
7	advisor to one of the states on the Rio Grande
8	Compact?
9	A. I have not.
10	Q. You explained the difference between project
11	accounting and Compact accounting yesterday?
12	A. My understanding of it, yes.
13	Q. But you have never done Compact
14	administration or Compact accounting, have you?
15	A. I have not.
16	Q. One of your duties is to track San Juan-Chama
17	project water and Rio Grande water, right?
18	A. Yes.
19	Q. And as you testified yesterday, you do that
20	using an accounting model that's based on the
21	RiverWare program?
22	A. Yes.
23	Q. You consider the RiverWare program to be
24	generally reliable?
25	A. Yes.

1 In fact, Reclamation uses RiverWare in the 0. Pecos River for the annual operating plan and 2 3 long-term studies, right? 4 Α. Yes, we do. 5 And you're aware that RiverWare is used by 0. 6 Reclamation in other river basins? 7 Α. Yes, I am. 8 Before we turn to more 0. All right. 9 substantive issues, I want to ask you if I'm correct 10 that Bert Cortez no longer works for the Bureau of 11 Reclamation? 12 Α. 13 0. 14 15

- That's correct. He no longer works here.
- For that reason, you're the only current representative of Reclamation that's testifying during the fall part of the trial; is that right?
 - Α. Yes. That's my understanding.

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And the reason I ask is because we have a --0. a number of requests for admission that the United States has admitted in this litigation. They've already been admitted as New Mexico Exhibits 1055 and I just wanted to give you a head's up that I may be needing to go into those subjects with you because you are the Reclamation witness during this fall part.

> So let's start with some basic All right.

1	features of the project and project history.
2	Generally, the project is intended to satisfy
3	irrigation demands on project lands, right?
4	A. Yes. Generally it's for irrigation purposes.
5	Q. Those project lands are spread out into two
6	different states?
7	A. Yes, they are.
8	Q. As you testified yesterday, the project
9	beneficiary in New Mexico is the Elephant Butte
10	Irrigation District or EBID?
11	A. Yes, it is.
12	Q. Now, you confirmed yesterday that EBID is the
13	only entity in New Mexico that's entitled to project
14	water, right?
15	A. They're the only one with the contract to
16	call for water, yes.
17	Q. You're aware that EBID was created by a New
18	Mexico statute?
19	A. I have seen that, yes.
20	Q. EP1 is the only project beneficiary in Texas,
21	right?
22	A. Yes.
23	Q. They were created EP1 was created by a
24	statute in the State of Texas, right?
25	A. I would assume so, but I haven't seen that.

1 Fair enough. The two districts are given an 0. 2 irrigation -- are given an allocation, I should say, 3 each year, right? That was your testimony? 4 Α. Yes. 5 0. And that allocation represents the total 6 amount of water that each district is entitled --7 entitled to order for each year? 8 Α. Yes. 9 On direct, you indicated that New Mexico does 0. 10 not have a contract with the United States -- and 11 these were your words -- under which it can demand water from the Rio Grande Project; do you recall that? 12 13 Α. I don't recall saying those words, but I do 14 recall saying that New Mexico does not have a contract 15 with Reclamation to call for project water. 16 Q. That's also true of Texas, Texas does not 17 have a contract with the United States, correct? 18 Α. That is correct. 19 And you indicated yesterday that, amongst Q. 20 other things, not having that contract means that New 21 Mexico is not allowed to use Rio Grande Project water, 22 right? 23 Correct. Α. 24 Q. That's also true for the State of Texas?

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Correct.

Α.

1 And, finally, you also indicated that New 0. 2 Mexico has never had a contract -- these, again, your 3 words, never, quote, had a contract with the United 4 States under which it could demand release or use of 5 project water; do you recall that? 6 I don't recall those exact words, but that Α. 7 sounds accurate. 8 Again, this is also true of Texas? 0. 9 Α. Yes. 10 In performing your professional duties for 0. 11 Reclamation, you understand that it's important to 12 follow Reclamation law in operating the project? 13 Α. Yes. 14 And you recognize that it's also important to 0. 15 follow other federal laws, right? 16 Α. Yes. 17 0. The Rio Grande Compact is a federal statute; 18 is it not? 19 Α. Yes, it is. 20 And so putting those two things together in 0. 21 carrying out your professional responsibilities, you 22 recognize that it's important to follow the Rio Grande 23 Compact? 24 Α. Yes.

Okay. So, now, turning to the relationship

25

Q.

1 between the Compact and the project, Reclamation 2 implements the Compact through its operation of the 3 Rio Grande Project, right? 4 Α. I think there's lots of aspects to the 5 Compact, but I know that the Rio Grande Project is 6 within the area of the Rio Grande Compact. 7 All right. And, again, I'm asking this, and 8 I just wanted to give you a head's up because this is 9 one of the things that the United States admitted. 10 Were you aware that the United States had admitted 11 that Reclamation implements the Compact through its 12 operation of the Rio Grande Project?

- A. I probably worked on the admissions, so yes.
- Q. Fair enough. I will -- I'll refer the Court to Exhibit New Mexico 1061 and Request for Admission No. 79 on Page 3, but I'll move on so as not to belabor the point. The project releases water to which water users in New Mexico and Texas are entitled, right?
- 20 A. Yes.

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Q. And in that way, Reclamation ensures that the Compact's equitable apportionment to Texas and part of New Mexico is made; is that right?

MR. DUBOIS: Objection; calls for a legal conclusion.

1 Again, Your Honor --MR. WECHSLER: 2 JUDGE MELLOY: I'm going to overrule 3 that. 4 MR. WECHSLER: Thank you, Your Honor. 5 0. (BY MR. WECHSLER) Would you like me to repeat 6 the question, Ms. Estrada-Lopez? 7 Α. Yes, please. 8 My question was -- We had talked about the 9 project releases water to which users in New Mexico 10 and Texas are entitled, and the question on the table 11 In that way, Reclamation ensures that the is: 12 Compact's equitable apportionment to Texas and part of 13 New Mexico is made? 14 I would never refer to that part of the 15 project under splitting the equitable apportionment 16 between New Mexico and Texas, but Rio Grande Project 17 does split the water between EBID and EP No. 1. 18 I'll accept that. I'll, again, refer the Q. 19 Court to New Mexico Exhibit 1061, Page 3, Request for 20 Admission No. 79. Turning to some of the testimony 21 from yesterday, you indicated that you developed the 22 initial allocations, right? 23 Yes, I do. Α. 24 0. Let's take a look at Exhibit -- New Mexico

Exhibit 2270 -- 2270, yeah. Again, this exhibit has

been admitted yesterday, and do you recognize this as sort of in the form of an initial allocation letter? We can see the date here from 2007.

- A. Yes. This looks like it would come from Reclamation.
- Q. And if we look at Page 4, we can see there's Mr. Cortez's signature, and he was your predecessor on the allocation committee, right?
 - A. That's correct.

- Q. Okay. I just -- we're continuing this discussion about the connection between the Project and the Compact, and I want to look at that bottom paragraph for starters. Here we can see that it's telling you that the storage available for release is -- is made after adjusting for Rio Grande Compact credit waters, right?
 - A. Yes. That's what it says.
- Q. And as you discussed yesterday, those Compact credit water, that's defined by the Compact, right?
- A. Yes. They give us the numbers for January 1st.
- Q. Starting with -- looking -- turning then to Page 2, and we're going to look at the first paragraph. Here we can see a reference to Article 7 of the Compact, and looking more broadly at that whole

paragraph, Mr. Cortez is alerting the interested parties when he estimates Article 7 restrictions will be lifted based on his accounting procedures, right?

- Q. Turning to the fifth paragraph, here we can see Mr. Cortez indicating that the long-term average release for project storage is governed by the Compact, right, to use his words?
 - A. That is what is written.

Α.

Yes.

- Q. And you agree with that?
- A. I do know that the 790 acre-feet is listed as a normal release in the Compact.
- Q. All right. We'll have a chance to look at more correspondence on that later in this trial. We can see Mr. Cortez is also explaining that average releases should be 790,000 acre-feet, as specified in the Compact -- Compact, right?
- A. It appears that he's using average and normal release interchangeably.
- Q. At the end of the paragraph, we can see there in the sentence that reads -- it's being highlighted now -- "the total amount of water released from storage for all Project purposes, including carryover water, shall not cause the yearly average release to exceed the 790,000 acre-feet established by Compact

1 rules." Do you see that? 2 I do see that. Α. 3 And so as Mr. Cortez is explaining the 0. 4 average 790,000 release includes carryover water, 5 right? 6 Α. That's what that says. 7 Q. Turning to Hudspeth -- and we can take down 8 this exhibit for the moment. Hudspeth County 9 Conservation and Reclamation District has a Warren Act contract with Reclamation. You explained that 10 11 yesterday, right? Yes, I did. 12 Α. 13 Hudspeth does not relieve any allocations for 0. 14 Project water from Reclamation? 15 Α. Is that a question? 16 Q. It is a question. 17 They do not receive allocations. Α. 18 0. And it cannot order water from the Project? 19 Α. It cannot. 20 It's not entitled to any set amount of water? 0. 21 Α. It is not. 22 Turning to the water rights underlying the Q. 23 Project, Elephant Butte Reservoir and Caballo 24 Reservoir are located in New Mexico, right? 25 Α. Yes.

1 And New Mexico law generally governs the use 0. of water in New Mexico, including groundwater, right? 2 3 MR. DUBOIS: Objection; lacks 4 foundation; calls for legal conclusion. 5 JUDGE MELLOY: I -- I'm going to sustain 6 that. 7 MR. WECHSLER: Very well, Your Honor. (BY MR. WECHSLER) I'd like to turn to Exhibit 8 0. 9 1055. And we're going to go to Page 7, Request for 10 Admission No. 7. I'll just ask you to read with me 11 here, Ms. Estrada-Lopez. Here we see that in the 12 middle of the admission here that, "The United States 13 admits that New Mexico law, which incorporates the 14 Compact, generally governs the use of water in New 15 Mexico, including groundwater." Did I read that 16 correctly? 17 Α. Yes, you read that correctly. 18 Q. The water rights for the Project are 19 generally governed by state law and federal 20 Reclamation law; is that right? 21 MR. DUBOIS: Objection; lack of 22 foundation, Ms. Estrada-Lopez's knowledge of these 23 laws. 24 JUDGE MELLOY: Again, I'm going to 25 sustain that without some foundation as to Ms.

Estrada-Lopez's knowledge of New Mexico law.

MR. WECHSLER: Very well.

- Q. (BY MR. WECHSLER) I'll just turn to Page 5 of this same exhibit. This time, we'll look at Request for Admission No. 3. And, again, I'll ask you to read with me, Ms. Estrada-Lopez. You can see towards the bottom, "The United States admits that its water rights for the Project are generally governed by New Mexico law, which incorporates the Compact, as well as by federal reclamation law." Did I read that correctly?
 - A. Yes. That's what that says.
- Q. Are you familiar with the Project water rights?
 - A. Generally, but not specifically.
- Q. Well, let me just get you to identify a couple of documents. We're going to start with Joint Exhibit 436. You recognize Joint Exhibit 436?
- A. It says that it's a Certificate of Adjudication from the Texas Commission on Environmental Quality.
- Q. Understood, Ms. Estrada-Lopez. The reason
 I'm asking, I just want to know if you are familiar
 with this document. If not, then I'm not going to ask
 you about this.

I'm not familiar with it. 1 Α. 2 All right. How about Joint Exhibit 472, are Q. 3 you familiar with Joint Exhibit 472? 4 Α. No. 5 How about Exhibit -- Joint Exhibit 473? 0. 6 Α. No. 7 Q. And Joint Exhibit 474? 8 Α. No. 9 Very well. We'll ask somebody else about Q. 10 You said you're generally familiar with the 11 Project water rights. Are you aware that the Project 12 or Reclamation has no permits for groundwater wells in 13 the State of Texas? 14 I've never looked for a permit for us. Α. 15 never seen one. 16 Q. And are you aware of any groundwater wells in the -- permits for groundwater wells in the State of 17 18 New Mexico that Reclamation has? 19 Α. I've never seen one for Rio Grande Project. 20 Turning then to project supply 0. Fair enough. 21 and return flows. Now, project supply is made up of 22 usable water and project storage and return flows; 23 would you agree? 24 Α. Yes. 25 Return flows that return to project drains,

0.

1 project facilities, or the bed of the Rio Grande are 2 part of project supply, right? 3 That's the definition we use. Α. Yes. 4 0. And that includes return flows that appear in 5 the El Paso Valley, those are part of project supply? 6 Α. Yes. 7 Now, you testified yesterday about river Q. 8 drains. Do you recall that? 9 Α. Drains. I don't think we have river drains. 10 Fair enough. Between 1945 and 1984, water 0. 11 users in El Paso No. 1 sometimes diverted water from 12 river drains into the Riverside Canal extension? 13 MR. DUBOIS: Objection; lack of 14 foundation. 15 JUDGE MELLOY: I'll overrule. If she 16 knows. 17 I know that there was diversions at Riverside Α. 18 and that drains come in above Riverside. (BY MR. WECHSLER) And drain water included 19 Q. 20 flows resulting from the application of Project water 21 to lands in EP No. 1? I haven't studied it, but I would assume so. 22 Α. 23 From 1938 to the construction of the American 0. 24 Canal extension, drains in EP1 delivered water to 25 Project diversions. Are you aware of that?

1	A. Can you say the first part again? I'm sorry.
2	Q. I can. It was just a time frame. So from
3	1938 to the construction of the American Canal
4	extension, and then the rest of the question was that
5	drains in EP1 delivered water to Project diversions?
6	A. That makes sense based on the way the system
7	was set up.
8	Q. From 1951 to 1979, water diverted by EP1
9	farmers from Project drains was considered to be part
10	of the Project's delivery?
11	A. Water diverted at the canal headings is
12	considered Project supply and so that was partly drain
13	water.
14	Q. And from that same period, 1951 to 1978, EP1
15	would have been charged for water diverted from
16	Project drains, right?
17	A. In the same manner that they are charged for
18	diversions of other water.
19	Q. And, in fact, turning to the present, say
20	2018 until the present, some water users in EP1
21	continue to use water in drains, right?
22	MR. DUBOIS: Objection; lack of
23	foundation.
24	JUDGE MELLOY: I'll overrule.
25	Q. (BY MR. WECHSLER) Do you need me to repeat

the question?

- A. Yes, please. I'm sorry.
- Q. Sure. We were talking about the present,
 2018 until current. Some water users in EP1 continue
 to use water in drains?
- A. I'm not super familiar with how all of the drains connect to the canals and laterals within the EP1 system, but if they do, then they can take the canal and laterals to their farms. If that includes the drain water, then, yes, they're using drain water.
- Q. Okay. And on this one, I'll refer the Court to Exhibit New Mexico 1061, Page 13, Request for Admission No. 100. And I'll ask you as a follow-up, an increase in Project return flows reaching EP No. 1 water users generally results in lower reservoir releases?
 - A. I'm going to have to have you say that again.
- Q. Yeah. Happy to. Again, I'm reading from a -- Exhibit 1061, Page 30, RFA No. 145. The question is: Would you agree that an increase in Project return flows reaching EP No. 1 water users generally results in lower reservoir releases?
- A. If the drain water reaching EP1 is used to meet the crop demand, then I would say that that would be directly related to a request from -- a release

1 from Caballo, so that could decrease the request of 2 the releases from Caballo. 3 Which is to say the amount of water from 0. 4 return flows in the El Paso Valley affects the amount 5 of water in Project storage, right? 6 Α. Yes. Anything that changes the crop demand 7 affects how much water is going to stay in Elephant 8 Butte and Caballo. 9 All right. Let's turn to the subject of Q. 10 groundwater. Now, you're aware there's groundwater 11 pumping throughout the Project area, right? 12 I am aware. Α. 13 0. And you understand there was a drought in the 14 late 1940s and early 1950s? 15 Yes. I've seen that data. 16 Q. One of the responses of the water users in 17 both EBID and EP1 to that drought was to drill wells 18 and pump groundwater, right? 19 MR. DUBOIS: Objection; lack of 20 foundation. 21 JUDGE MELLOY: Well, she's testified she 22 knows about the drought and about wells. I'll let her 23 -- to the extent she knows, she can answer. 24 Α. I have read about that, but that -- they did 25 pump.

1	Q. (BY MR. WECHSLER) For example, have you read
2	some of the documents reflected in the project
3	histories?
4	A. Probably. I have read some project
5	histories.
6	Q. And some of those project histories indicate
7	that Reclamation was encouraging water users to use
8	groundwater?
9	MR. DUBOIS: Objection; lack of
10	foundation; assumes facts not in evidence.
11	JUDGE MELLOY: I'm going to sustain that
12	until you lay some more foundation, Mr. Wechsler.
13	MR. WECHSLER: Certainly.
14	Q. (BY MR. WECHSLER) Let's look at Joint Exhibit
15	206, which has already been admitted, and we'll look
16	at Page 52. Here, we're looking at a water
17	announcement. You're aware that as part of those
18	project histories, Reclamation frequently gave water
19	announcements to the water users, right?
20	A. Yeah, I've seen those before.
21	Q. And if we look at the last paragraph on this
22	page, we can see it's saying, "Water users who have
23	pumps of good capacity that will supply their needs
24	are requested to arrange for transfer of part of their
25	unused allotment to those who are in need of

1	additional water." Do you see that?
2	A. I do see that sentence.
3	Q. And if they're willing to negotiate a
4	transfer, they're asked to contact one of the offices
5	of the Bureau of Reclamation, right?
6	A. Yes. That's what it says.
7	Q. You're aware that similar language was
8	included in subsequent project histories?
9	A. I don't recall.
10	Q. All right. Well, I'll just refer the Court
11	to New Mexico Exhibit 1055 at 7, Request for Admission
12	No. 11 on that issue.
13	More generally during the years 1951 to 1978,
14	groundwater wells were drilled in both New Mexico and
15	Texas. Were you aware of that?
16	A. I've seen some reports on that.
17	Q. And from 1950 to the present, the United
18	States was aware of groundwater pumping in New Mexico?
19	A. Yes.
20	Q. Water was pumped from those groundwater wells
21	during that period, 1951 to 1978?
22	MR. DUBOIS: Objection; lack of
23	foundation.
24	MR. WECHSLER: Your Honor, again, this
25	comes from a request for admission so I'll simply

refer you to Exhibit 1055 at 21, RFA No. 60 -- I'm
sorry. This is -- I had the wrong cite there. This
is New Mexico 1061. This is Pages 20 through 22
because it's Request for Admissions No. 114 to 120,
and also Request -- New Mexico 1055 at 12, Request for Admission No. 26.

- Q. (BY MR. WECHSLER) Now, let me ask you this, Ms. Estrada-Lopez: Groundwater pumped from wells is not accounted for as Project water, right?
- A. There are some accountings related to the water pumped from groundwater.
 - Q. For example, the Canutillo wellfield?
- 13 A. Yes.

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- Q. We'll get to that, but in general, groundwater is not accounted for as Project water, right?
- A. We do not collect the groundwater data and put it into the accounting generally.
- Q. All right. Fair enough. And as a more complete answer, I'll also refer to 1055 at 21, RFA No. 60. And as we said, Reclamation does not own or operate any wells in the Project area, right?
 - A. Not that I'm aware of.
- Q. All right. So in turning to EBID on this same subject, in the 1970s, Reclamation -- well, let

me just ask: Are you aware that Reclamation and the United States Geological survey provided engineering and technical assistance to EBID when the district was considering irrigation wells?

A. I don't know about that.

- Q. Okay. I'm going to ask you to read along with me on a couple of these RFAs again. This is New Mexico Exhibit 1055. We are going to look at Page 6, No. 10. Here you can see that towards the top -- just read along with me -- "The United States admits that in the 1970s, Reclamation and the U.S. Geological Survey rendered engineering and technical assistance to EBID when the District was considering feasibility plans to drill deep irrigation wells in the District." Do you see that?
- A. Yes, I see that.
- Q. All right. Let's do this with a couple more in this general area. So we're going to move further down to Request No. 11 here, but let me ask you: Are you aware that the Project superintendent for much of the D2 period was a man named J.W. Kirby? Are you familiar with him?
 - A. I've heard the name.
- Q. All right. And then turning to the RFA then
 -- yeah. So -- well, what I think we should be

looking at is 1055 at 3, RFA No. 4. Is that right?

No -- yeah. And you can see here at the bottom, it indicates, "The United States also admits that a" -- well, let's start above there. "The United States admits that in the Mestas litigation, the United States represented that Project superintendent J.W. Kirby orally approved EBID's location of five wells on Project right of way." Do you see that?

- A. Yes, I see that.
- Q. Again, continuing there, it says that, "The United States also admits that a declaration submitted in the Mestas litigation that is signed by J.W. Kirby and dated 11/21/78 states that, quote, during the last 25 years approximately, I estimate that perhaps 200 to 300 privately-owned irrigation wells have been constructed on Bureau of Reclamation right-of-ways within the Elephant Butte District." Did I read that correct?
 - A. Yes.

- Q. Turning to EP No. 1 then, groundwater pumping has occurred in EP No. 1, right?
 - A. That's my understanding.
- Q. Is it also your understanding that that groundwater pumping has occurred in both the Mesilla portion of EP1 and the Hueco Bolson portion of EP1?

A. That is my understanding.

Q. Is it your understanding that beginning, say, in the 1930s to the 1990s, the pumping in Texas in the Hueco Bolson aguifer in Texas increased?

A. I have not studied --

MR. DUBOIS: Objection -- Your Honor, objection. This is beyond the scope of her direct examination, and it is asking regarding historical documents from -- from prior periods that we haven't established that she has -- that Ms. Lopez-Estrada has reviewed or analyzed. This is -- this is inconsistent with her percipient testimony.

MR. WECHSLER: So, Your Honor, if I can respond. I mean, first, Ms. Michelle -Ms. Estrada-Lopez testified to the Project, the
Project area, water use within the Project, Project facilities, water users within the Project; second,
New Mexico has identified Ms. Estrada-Lopez as a may-call witness, and it was for precisely this reason, in case we wanted to raise additional issues with Ms. Estrada-Lopez, and so, I mean, if -- if
Ms. Estrada-Lopez and Mr. Dubois simply want us to call her back in the later part of this October trial, we're happy to do that, but it certainly strikes me as inefficient.

1	JUDGE MELLOY: I'm going to overrule.
2	To the extent she has knowledge of that, I'll let her
3	answer. Why don't you restate the question,
4	Mr. Wechsler.
5	MR. WECHSLER: Sure. Happy to.
6	Q. (BY MR. WECHSLER) My question is that pumping
7	from the Hueco Bolson aquifer in Texas increased
8	during the 1930s to the 1990s. Were you aware of
9	that?
10	A. I
11	MR. DUBOIS: Objection; lack of
12	foundation to the question itself.
13	MR. WECHSLER: Your Honor, the question
14	is was she aware, which is a foundational question
15	itself, and so
16	MR. DUBOIS: Well, actually
17	MR. WECHSLER: There's been a number of
18	objections that seem a little uncalled for.
19	JUDGE MELLOY: Overrule the objection.
20	Q. (BY MR. WECHSLER) I understood,
21	Ms. Estrada-Lopez, you were not aware of that?
22	A. I've not looked at that data.
23	Q. I'll I'll refer the Court to New Mexico
24	1055 at 19, Request for Admission No. 55.
25	Ms. Estrada-Lopez, over the last 10 to 15 years, EP

1 No. 1 has pumped and discharged groundwater into 2 Project canals and laterals; you're aware of that? 3 I don't recall that. Α. 4 0. All right. And I'll simply refer the Court 5 then to Exhibit 1055 at 5, RFA No. 9. And are you 6 aware that pumping in the Texas part of the Rio Grande 7 Basin caused average groundwater elevations in the El 8 Paso Valley to decrease between the 1950 and 1990s? 9 MR. DUBOIS: Objection; lack of 10 foundation for the question. 11 MR. WECHSLER: Again, Your Honor, the 12 question is, is she aware. 13 JUDGE MELLOY: Overruled. 14 0. (BY MR. WECHSLER) Were you aware of that, 15 Ms. Estrada-Lopez? 16 Α. I have not looked at the groundwater levels 17 in the Hueco Bolson. 18 Have you looked at the groundwater levels Q. 19 anywhere within the Project area? 20 I oversee the contract with USGS, and they 21 are looking at them. So I've seen some of the 22 results. 23 In what area of the Project? Q. 24 Α. In the Rincon and Mesilla Basins. 25 Does that include the Mesilla part in Texas? 0.

A. Yes.

- Q. But not the Hueco Bolson?
- A. No.
 - Q. Does that Project date back to the 1950s?
- A. The groundwater collection -- data collection project that I'm part of started, I think, in the 1980s, and the modeling project that I'm leading the contract on is looking at historical data, which does include that time period.
- Q. Let me ask you this then: Some groundwater pumping in Texas has reduced the amount of Project water available for delivery to Project water users in Texas, right?
- A. I haven't looked at specifically that groundwater pumping has specifically reduced. I haven't looked at that data.
- Q. All right. Let's -- I'm going to refer the Court then to Exhibit -- New Mexico 1055, Page 22, RFA No. 62. I want to get you to look at a -- an older Reclamation document, Ms. Estrada-Lopez, and this is Joint Exhibit 462. If you look at the top there, you can see this is a Bureau of Reclamation document. You can see the title shown on the screen, "River Loss Caballo Dam to El Paso and Irrigation Wells," then if we look further down, you can see the year, July 1st,

1952. Have you ever seen this document before?

A. Probably, but I don't recall it specifically.

- Q. My -- my general question -- we can take down that exhibit if you haven't seen it before -- is that the United States has generally been aware over the years of groundwater pumping throughout the basin. We talked about that. Was -- was Reclamation also aware of the impacts that that groundwater pumping could have on Project supply?
- A. I don't know what was aware by whom at what time.
- Q. Since you've been working for Reclamation roughly 2009, Reclamation has been aware that -- of the impacts of groundwater pumping in the basin; is that right?
 - A. Yes. I've seen documents that refer to that.
- Q. And have you seen documents reflecting that Reclamation was aware of impacts to groundwater pumping dating from before the time you started at Reclamation?
 - A. I don't recall specifically. It makes sense.
- Q. It just makes sense; you don't know one way or the other?
 - A. Correct.
 - Q. All right. So that takes us to the

1 allocations. As you testified yesterday, an 2 allocation is an amount of water that is set by 3 Reclamation, and that's available for a Project user 4 to order for release, right? 5 For delivery to their diversion point, not Α. 6 for release. 7 Q. The release gets done by Reclamation with the 8 intent of allowing that water to get to the delivery 9 point? 10 Α. For a portion of that water, yes. 11 The allocations determine the amount of Q. 12 storage that can be released and for what purpose, 13 right? 14 It determines what can be released for the Α. 15 Project. 16 0. Right. And for what purpose the Project will 17 release that water? 18 I'm not sure what purpose it is referring to. Α. 19 I'm sorry. 20 Well, in other words, you testified yesterday 21 you have -- there's a number of accounts in the 22 Project, right? There's an account for EBID, right? 23 Α. Yes. 24 And water can be released in response to 0.

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orders from EBID?

1 Α. Yes. 2 And those orders are for irrigation purposes, Q. 3 you mentioned earlier today, right? 4 Α. Yes. 5 0. There's also an account for EP No. 1? 6 Α. Yes. 7 And then you mentioned there's water in the Q. 8 Project that is Compact credit water, correct? 9 Project storage, yes, there is. Α. 10 That water is released when it is 0. 11 relinquished by one of the states, right? 12 Α. We only release Project water. 13 Fair enough. And I think that's a bad 0. 14 If a relinquishment occurs, then it becomes question. 15 part of Project water, right? 16 Α. Yes. 17 0. And you also mentioned yesterday, there is 18 San Juan-Chama water? 19 Α. Yes. 20 Now, at least since 1980, the districts were 0. 21 allotted a diversion allocation that's made up of both 22 usable water in storage and return flows, right? 23 Α. Yes. 24 As you go through the year, Reclamation is Q. 25 coordinating and making sure the districts are not

ordering and diverting more water than they've
released -- than -- than they're allocated, I should
say?

A. Correct.

One reason to track the allocations is that

- Q. One reason to track the allocations is that you want to make sure that there's water available to meet orders?
 - A. Track allocations to make the allocations.
- Q. Is it important to ensure that there's enough water in the reservoir to meet Project orders?
- A. The order should only be based on water that's been allocated, and that allocated water is based on the water that's in the storage.
- Q. Very well. I'll accept that. Let's turn to Mexico generally, and we'll come back to Mexico again later. But let's look at Joint Exhibit 439. As that's coming up, the allocation to Mexico is based on this convention or treaty that you identified yesterday, right?
- A. Yes.

- Q. And the -- this convention was adopted in 1906?
 - A. Yes. That's the date on it.
- Q. So it was in place prior to the adoption of the Compact?

1 Α. Yes. 2 A full allocation to the United States for 3 delivery to Mexico is 60,000 acre-feet; is that 4 correct? 5 Α. Yes. 6 When Mexico has allocated 60,000 acre-feet of Q. 7 water, that's generally considered to be a full supply 8 year? 9 For Mexico, and then if people are asking, Α. like, from the public for information, this is the 10 11 easiest data to pull to say if it was a full year or 12 not. 13 The orders then -- the water from Mexico is 0. 14 then ordered by IBWC, right? 15 Α. Yes, it is. 16 And that water is delivered to the bed of the Q. 17 Rio Grande at the heading of the Acequia Madre? 18 Α. Yes. 19 I think you looked at some pictures of the Q. 20 Acequia Madre yesterday? 21 Α. Yes, I did. 22 Let's highlight that language just below the Q. 23 table. We see this is the language you testified to 24 yesterday that, "In -- in times of extraordinary

drought, the amount delivered to the Mexican Canal

shall be diminished in the same proportion as the 1 2 water delivered to lands under said irrigation system 3 in the United States," right? 4 Α. Yes, that's the language. 5 And you actually perform a check every year 0. 6 to make sure that this is followed, correct? 7 Α. Yes. 8 We'll have an opportunity to review how Q. 9 that's done in a moment so we can take down Joint Exhibit 439. 10 11 Now, prior to 1980, Reclamation operated the 12 entire Project? 13 Α. Yes. That's correct. 14 So before 1950, and that's changing time 0. 15 period right now, so prior to 1950, Reclamation 16 delivered water directly to Project lands, right? 17 Α. Yes. 18 And that process of delivering directly to 19 lands continued until somewhere in the early 1980s 20 when the title transfer occurred? 21 Α. Yes. That's my understanding. 22 Some time in the early 1950s, the Project Q. 23 began the process of giving specific allocations or 24 allotments directly to the lands, right?

Yes. That's what I recall seeing.

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Α.

1 And so from 1950 to 1980, the Project Q. 2 allocation was allocated to all Project land on an 3 acre-foot-per-acre basis? 4 Α. Yes. That's my understanding. 5 Prior to 1979, Reclamation would combine 0. 6 storage and return flows so that each acre of Project 7 land received an equal amount of water, regardless of 8 what district the land was located in? 9 MR. DUBOIS: Objection; lack of 10 foundation. 11 This goes to allocations, MR. WECHSLER: 12 Your Honor. If she doesn't know the answer to that, 13 she certainly can say, and I'd be concerned. 14 JUDGE MELLOY: Well, she has talked 15 about the contract and -- and the changes into the --16 how the allocation was made from directly to the farms 17 to the water districts, so I think it's within the 18 scope, and I'll overrule. 19 (BY MR. WECHSLER) Would you like me to repeat Q. 20 that question? 21 Α. Yes, please. 22 So the question was: Prior to 1979, Q. 23 Reclamation would combine storage and return flows so 24 that each acre-Project land received an equal amount 25 of water, regardless of what district the land was

1	located in?
2	MR. DUBOIS: Objection; Your Honor,
3	still lack of foundation because Mr. Wechsler's
4	question is delivery to the farm, not allocation.
5	Ms. Estrada-Lopez's testimony was regarding
6	allocation.
7	JUDGE MELLOY: I'm going to overrule.
8	You may answer.
9	A. I don't know how much water was delivered to
10	the farms.
11	Q. (BY MR. WECHSLER) Fair enough. I'll direct
12	Counsel and the Court to New Mexico 1055 at Pages 7 to
13	8, Request for Admission No. 13. So,
14	Ms. Estrada-Lopez, a full allocation to Project lands
15	from 1950 to 1980 was 3.024 acre-feet per acre; is
16	that right?
17	A. That sounds right, because the 3.024 is what
18	I've seen as being labeled a full allocation.
19	Q. I'm going to turn to Page to Joint Exhibit
20	469, which has not been admitted yet oh, I was just
21	informed that the the United States and Texas have
22	withdrawn their objection to Joint 469. I don't know
23	if that's correct or not?
24	MS. KLAHN: It's my understanding that
25	that 's accurate from Texas' point of view, and I

1 believe from U.S. 2 MR. WECHSLER: Your Honor, you're on 3 mute. 4 JUDGE MELLOY: To the extent 469 has not 5 been admitted, is there an objection? 6 MR. DUBOIS: No, Your Honor. 7 JUDGE MELLOY: I'll admit Exhibit 469. 8 (BY MR. WECHSLER) All right. Then, 9 Ms. Estrada-Lopez, turning to -- to Joint Exhibit 469, 10 then we can see this is a memorandum of conversation 11 at the top dated June 29th, 1956, with the subject 12 line, "1906 Treaty Deliveries to Mexico." Do you see 13 that? 14 I do. Α. 15 Then just to identify a couple of these 16 players here, which we may hear from the historians, 17 but we can see there in particular, the principal 18 engineer was a Mr. J.F. Friedkin. Do you see that? 19 Α. Yes. 20 Have you seen other documents with 21 Mr. Friedkin's name on it? 22 His name, I do not recall. Α. 23 Fair enough. All right. So I do want to 0. 24 just look very briefly at the steps that are outlined

here, and so if -- if we back out there, we can see --

it says just above there -- highlight that section.

We can see that he's advising -- Mr. Resch is advised that the determination of the amount to Mexico is made by Reclamation on the following bases. And then I just want to ask if you're familiar with this process. So if we look at No. 1 here, "At the beginning of an irrigation season, determination is made of the amount of water available for irrigation at that time." Do you see that?

A. Okay. Yes.

- Q. They go on, "Which is the amount of water then in project storage, less the estimated evaporation losses and less silt encroachment," right?
 - A. Yes. That's what it says.
- Q. And then that's somewhat consistent with the process you described yesterday, right, you first have to figure out how much water is in Project storage?
 - A. Yes. It looks similar.
- Q. Then if you go to the next page under the heading No. 2, there we can see that, "On the basis of experience and judgment, determination is then made as to the probable operating efficiency of the Rio Grande Project, which is defined as the ratio of the quantity of water applied to lands, delivery at the farmers' gates, to the total release at Caballo Dam." Do you

see that?

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- A. Yes, I see that.
- Q. And yesterday, you testified at length about figuring out the river efficiency, right?
 - A. Yes.
- Q. And then turning then to the third step here outlined in 1956, we see then that, "The efficiency factors applied to the total amount of water -- project storage to determine tentatively the amount available for delivery." Do you see that?
 - A. Yes, I see that.
- Q. And then turning to No. 4, then this goes to the -- what we were just talking about by Mexico -- about Mexico, that the tentative percent of normal delivery to the United States lands is applied to Mexico, right?
 - A. Yes.
- Q. Do you see that?
- 19 A. Yes.
 - Q. All right. So were you familiar with this process that occurred, at least as of 1956, for allocating water? We can go through the other steps, but certainly this is an exhibit already?
- A. Yes. I know it wasn't the way I do it now, and this looks like a written description of that

process --

- Q. All right.
 - A. -- in that time.
- Q. We're still talking about this period, 1950 to 1979. Let's look at what the allocations were during that time, and for that, I'll refer to Joint Exhibit 470, which has already been admitted. Let's highlight that period, 1951 to -- let's go all the way to 1984. There you go. Is that big enough for you to see, Ms. Estrada-Lopez?
 - A. I think so.
- Q. All right. We can see the years on the left-hand column, and then the final allotment is the fifth column over there. You see that? No, one over. It says, "Final allotment to Project lands." Do you see that?
 - A. Yes.
- Q. And then we can see in acre-foot per acre the amount that was allotted from 1951 all the way to 1984 on an acre-foot-per-acre basis, right?
 - A. Yes.
- Q. We can see consistent with that 3.024 number that we talked about earlier, I counted up only three years, those being in 1958, '59, and 1960, where that amount -- acre-foot-per-acre amount rose above 3

1 acre-feet per acre. If you take a look at that, does 2 that look correct? 3 Well, I can see in 1962, it says 3.25. Α. 4 0. You're right. 1962, yep, thank you. Any 5 others you notice above 3.0 acre-feet per acre? 6 Α. I don't see any others. 7 So turning then to the D2 period allocations Q. 8 -- we can take down Joint Exhibit 470. As you 9 mentioned yesterday, in the early 1980s, EBID and EP 10 No. 1 took over operation and maintenance of Project 11 canals, laterals, and drains, right? 12 Α. Yes, they did. 13 And will you understand me if I refer to that 0. 14 as the title transfer? I think I already used that 15 I should have asked you then. 16 Α. Yes. 17 0. So as part of title transfer, Reclamation 18 would no longer be delivering water to the lands of 19 the farmers, right? 20 Α. Correct. 21 0. Instead, they'd be delivering water to the 22 diversion points for the two districts? 23 Α. Yes.

And those diversion points means diversions

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from the Rio Grande?

1 I don't know that it specifically means that. Α. 2 Oh, fair enough. Now, in order to determine Q. 3 the allocations following that title transfer, 4 Reclamation developed the D1 and D2 curves; is that 5 right? 6 Α. That's my understanding. 7 Q. And the D1 and D2 curves were developed from 8 operations data from 1951 to 1978? 9 Α. That's my understanding. 10 0. And we sometimes refer to those years, those 11 1951 to 1978, as the D2 period. Are you familiar with 12 that term? 13 Α. I am. 14 So the data from that D2 period reflect 0. 15 historic Project performance during those years, 16 right? 17 It reflects the deliveries and releases. Α. I'm 18 not sure what Project performance is related to. 19 Q. Okay. Well, those deliveries and releases, 20 that data also includes the effects of losses and 21 inflows on Project deliveries, right? 22 Α. Yes. 23 So to the extent that those deliveries and 0.

releases from 1951 to 1978 was impacted by existing

groundwater pumping, the effect would be reflected in

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the data?

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A. I haven't studied that, but to the extent the deliveries were impacted by losses in the river, and I testified yesterday that the river losses are related to groundwater levels, then that could make sense.

- Q. Okay. So turning then to the D1 curve, as you testified yesterday, it's a linear regression equation that represents the historic relationship between deliveries to lands and Project releases?
- A. Deliveries to lands and the Acequia Madre and Project releases.
- Q. Thank you for that correction. From 1980 through 2005, Reclamation calculated the allocation of water to Mexico using the D1 curve, right?
 - A. I don't know that they use the D1 curve.
- Q. How do you think they allocated water from 1980 through 2005 to Mexico?
- A. Well, I would have to look at the data specifically, but from what I recall, most of those years were 60,000 acre-feet, which is the -- just the values stated in the treaty.
- Q. In other words, for most of those years, it was a full supply year to Mexico?
 - A. That's what I recall.
 - Q. Turning to the D2 curve, the D2 curve, as you

1 testified to yesterday, is a -- a linear regression 2 equation that represents the historic relationship 3 between total Project deliveries to canal headings and 4 Project releases? 5 Α. It says on the graph project, the delivery to 6 Project headings and then the total releases. 7 So are you agreeing with me? Q. 8 Α.

- A. You said canal headings, and that's not what it says.
- Q. Oh, you're just saying it's just a headings
 -- Project headings. Got it. Now, the D2 curve
 includes data on deliveries to all authorized points
 of diversion; is that right?
- A. I have not studied all of the data that went into the D2 curve so I cannot answer that.
- Q. How about this, if I said the D2 curve relates the amount of water released from storage to the amount of water delivered to the diversions downstream, would you agree with that?
 - A. Yes. It's the relationship.

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- Q. And I think you agreed the D2 calculation is based on actual data from 1951 to 1978, right?
 - A. That's my understanding.
- Q. And I -- I think you also agreed that it would have included the effects of water use during

1 that period? 2 Α. I don't think I said that. 3 Well, would you agree it does include the 0. 4 effects of water use during that period? 5 Α. I think that's too general for me to say yes. 6 How would you correct it? Q. 7 Α. Like I said earlier, it would reflect the 8 losses in the river and losses in the river are 9 related to groundwater levels near the river. 10 Okay. If -- let's see. Do you know that --0. 11 do you know what the lowest delivery point included in 12 the D2 curve was? 13 MR. DUBOIS: Objection; vaque. 14 JUDGE MELLOY: I'll overrule. 15 Again, I have not looked at the data that 16 went into the D2. 17 (BY MR. WECHSLER) All right. So I -- I do 0. 18 want to look at a demonstrative exhibit now, though, 19 and see if you'll agree with me. This is New Mexico 20 Demonstrative Exhibit 1. 21 Your Honor, I'm informed MR. WECHSLER: 22 that there are no objections to this demonstrative 23 exhibit, which is essentially just a Google Earth with 2.4 some data from part of the case in it. Can I just ask

-- Your Honor, you're on mute again.

JUDGE MELLOY: Sorry. If it's not already admitted, it will be for demonstrative purposes only.

MR. WECHSLER: Understood.

- Q. (BY MR. WECHSLER) Are you able to see that on your screen, Ms. Estrada-Lopez?
 - A. Yes, I am.

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- All right. And I'm going to sort of walk 0. through the process here in case any of the parties or the Special Master wants to -- to start operating this. I mean, here, I'll ask Ms. Ferguson, our technician here, to click on the arrow for EPCWID, and that opens up -- as you can see, it opens up that area, and then we're going to click on the arrow for EPCWID Major Conveyances, which is already opened, and then we're going to click on the arrow for Main Canals, which is also already opened, and then we're going to click on the box for -- yeah, for Riverside Canal, and then we're going to double click Riverside Ms. Estrada-Lopez, are you able to see the first -- the blue line there on New Mexico Demonstrative Exhibit 1?
 - A. Yes, I am.
- Q. And you recognize that as being in the general location of the Rio Grande River?

1 Yes, I do. Α. 2 Q. And then you see the orange line there? 3 Yes, I do. Α. 4 0. You recognize that generally as the Riverside 5 Canal? 6 Α. Yes. 7 Do you know if the data from deliveries to Q. 8 the Riverside Canal was included in the D2 curve? 9 Α. I believe it was, but I have not looked at the data that went into the D2 curve. 10 11 Q. All right. We're also going to click the 12 button here for the Riverside Canal delivery. Do you 13 see that, the Riverside Canal Delivery Gage. 14 see that just came up as a little orange triangle, 15 right? 16 Α. Yes, I see that. 17 Do you recognize that as the location of the 0. 18 area where water is delivered into the Riverside 19 Canal? 20 Α. Yes. 21 0. Now, we're going to go up to Caballo

Reservoir, so we'll -- we'll click on the box for --

on the arrow for Rio Grande Project Dams, which is a

little bit lower. There it is. It's already been

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Caballo, and then we're going to double-click on Caballo there, and this is going to shift to -- it's okay. Double-click Caballo, and that's going to take us up to Caballo Reservoir. Does that look, generally, like the location of Caballo?

A. Yes, it does.

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- Q. All right. So, now, I want to look at the wells in the Project between those two locations, so I'm just going to ask Ms. Ferguson to just click on the box for wells. There we go. And then we're double-clicking on the wells button, and you'll see these wells being populated. It may take just a moment. I understand that you likely don't have all This will be presented later. of this data. just represent, these are wells within the -- the basin. You can see the key there for the types of And if we look carefully, we can still see the wells. Riverside Canal delivery gage at the bottom of the Do you see that? screen.
- 20 A. Yes, I do.
 - Q. And then we can see Caballo at the top, right?
 - A. Yes.
 - Q. And so if -- if -- to the extent any of these wells were drilled and pumping water prior to 1979,

1 then that data would be included in the D2 curve, 2 right? 3 Α. I don't think that groundwater pumping data 4 was included. 5 0. Well, the effects on releases and deliveries 6 would be incorporated? 7 Α. The releases and deliveries were 8 incorporated. 9 So the effects on those releases and 0. 10 deliveries would be incorporated? 11 Again, I don't know that for sure. Α. 12 Q. All right. Now, we can get rid of this for 13 now. We'll come back to it later. In case I didn't 14 ask you it earlier, from the early 1980s until roughly 15 2005, the allocations to the districts were calculated 16 using the D2 curve; is that right? 17 I don't know that specifically. Α. 18 You're in charge of allocations on behalf of 0. 19 Reclamation now; is that right? 20 Α. Yes, I am. 21 If I'm understanding you correctly, there's 0. 22 parts of the D2 curve you're unfamiliar with? I have not reviewed the data. Dr. Ferguson 23 Α. 2.4 and Dr. Al Blair know enough about the data to review

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that, but I do not.

Understood. But neither Dr. Blair or -- or 1 0. 2 -- well, Dr. Blair doesn't work for Reclamation, 3 right? 4 Α. No, he does not. 5 And you're the one who sits on the allocation 0. 6 committee for Reclamation; is that right? 7 Α. Yes, I am. 8 You have not reviewed that data? 0. 9 Α. I have not. 10 And you don't know whether or not from the 0. 11 1980s until 2005, the allocations to the districts 12 were done using the D2 curve? 13 Α. Well, my understanding is the D2 curve was 14 being developed starting in the 1980s, and I have not 15 looked at every single allocation through that time 16 period and the calculation that went into that. 17 0. So my question again, you don't know what 18 happened during that time period? 19 Α. I do not know everything that happened. 20 Let's take a look at a document and see if 0. 21 you're familiar with this document. It's Joint 22 Exhibit 440, and this has not been admitted yet. 23 you familiar with this document, Ms. Estrada-Lopez? 2.4 Α. I've seen it.

And where did you see it?

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1 In Reclamation files. Α. 2 You can see on the face of it, it says Q. 3 created by the Bureau of Reclamation, and it's 4 entitled, "Operating Agreement," right? 5 Α. I don't see that it says that it was created 6 by the Bureau of Reclamation. 7 All right. Well, it does say -- it 8 identifies the Bureau of Reclamation, El Paso County 9 Water Improvement District No. 1, and Elephant Butte 10 Irrigation District, correct? 11 That's what it says. Α. 12 Q. It also has the title, "Operating Agreement"? 13 Yes, it does. Α. 14 And it refers to the Rio Grande Project, 0. 15 right? 16 Α. Yes. 17 0. Turning to Page 2, you recognize the name of 18 Roger K. Patterson? 19 Α. I do not. 20 Do you recognize the name Steve Reynolds? 0. 21 Α. I do. 22 Who is he? Q. 23 He was the state engineer from New Mexico for Α. 24 a very long time. 25 0. Are you familiar with the past Project

1	superintendents of the Project?
2	A. I have not had occasion to review that.
3	Q. You can see here this is stamped received
4	January 31st, 1985. Do you see that?
5	A. Yes.
6	Q. This has been identified as a joint exhibit.
7	If you go out to Page 1, let's take a look at that.
8	Do you see that Joint Exhibit 440?
9	A. Yes, I see that.
10	MR. WECHSLER: Your Honor, I'm going to
11	go ahead and offer this exhibit now.
12	JUDGE MELLOY: Any objection,
13	Mr. Dubois?
14	MR. DUBOIS: None from the United
15	States, Your Honor.
16	JUDGE MELLOY: Ms. Klahn? You're muted.
17	There you go.
18	MS. KLAHN: Sorry, Your Honor. My only
19	objection would be foundation as far as whether this
20	witness really knows enough that she could talk about
21	this agreement, given that she doesn't wasn't
22	working for Reclamation at the time, and wasn't
23	familiar with Mr. Patterson.
24	JUDGE MELLOY: Well, she did testify,
25	though, she had seen the document in the files of the

-- of the Reclamation so I'm going to admit 440.

- Q. (BY MR. WECHSLER) Turning, Ms. Estrada-Lopez, to Page 8 of this document -- and if at any time there's parts of this that you simply don't know or don't understand, please let me know. And I'm going to look at the definition here at Project supply, which has now been highlighted. You can see in this document, this operating agreement -- well, let me -- before we go there, are you familiar -- are you aware of any other operating agreements from the period 1980 to 2005 for the Rio Grande Project?
- A. I'm not.

- Q. So we can see the definition of Project supply here included, "Stored water legally available for release in Elephant Butte and Caballo Reservoirs."

 Do you see that?
 - A. Yes.
- Q. And then it also included water that,
 "legally appropriated waters reaching the bed of the
 Rio Grande between Caballo Dam and Riverside Diversion
 Dam." Do you see that?
 - A. Yes, I do.
- Q. We looked at Riverside gage earlier just a moment ago, right?
- A. Yes, we did.

If we move down to the next definition here 1 0. 2 of allocated water, and here we can see that it's 3 defined as that portion of water that's determined to 4 be available for diversion, right? 5 Α. That's what it says. 6 Yeah. Okay. So I want to move to the last 0. 7 paragraph of -- of this page. I'm calling it Page 8. 8 I'm using the Bates numbers at the very bottom rather 9 than the actual number of the document, just for the 10 purposes of the record. And here we can see in the 11 second sentence, it says, "The amount delivered to the 12 Mexican Canal, Acequia Madre, shall be furnished in 13 the same proportion as the water delivered to lands 14 under said irrigation system." Do you see that? 15 Α. Yes, I see that. 16 Q. And that's consistent with the testimony you 17 gave earlier about the treaty, right? 18 Yes, it is. Α. 19 The next sentence says, "The first allocation Q. 20 to lands in the United States was made in 1951." 21 you see that?

- A. I see that's what it says.
- Q. Is that consistent with your understanding?
- A. It is.

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Q. And then the next sentence says, "An analysis

done at that time established 3.024 acre-feet as a full supply to U.S. farms." Do you see that?

A. Yes.

And that's also consistent with your

- A. I have seen it referred to as the full supply.
- Q. And here, they identify that number as 482,800 acre-feet, which they explain in the parenthetical is that full supply number of 3.024 acre-feet per acre times 159,650 acres. Do you see that?
 - A. I do see that.
- Q. All right. So turning to the next page to Page 9, in the top paragraph, let's go ahead and blow that up. First, it tells you that, "Statistical evaluations of operational records for the period of 1951 through 1978 inclusive have been made," and that's consistent with your earlier testimony, right?
- A. Yes.

understanding?

Q. And let's see. It then says, "These evaluations have provided graphs, equations, and data that can be used to ensure that future allocations to Mexico and the allocations to the U.S. maintain the historical relationship between the delivery of water

to U.S. farms and Mexico." Do you see that?

A. I do see that.

- Q. All right. Then let's take a look a little bit further down to see those statistical -- so if we look at the second paragraph, which has been highlighted here, they're referring there to the D1 curve, right? And -- you see that?
 - A. Yes. I see the word D1 -- Curve D1.
- Q. It refers to this exhibit. Why don't we take a look at the exhibit, which is on Page 40 of this document, again, using the Bates stamps at the bottom. This may be difficult to read. It's an old document. If you look in the far right-hand corner, it says, "Curve D1." Do you see that?
- A. I do see that.
 - Q. You recognize this as the D1 curve?
 - A. It looks correct.
 - Q. All right. And then if we go back to Page 9, and we were looking at the second paragraph, I believe, on Page 9. And this confirms that it's the relationship between the water released from storage and the delivery to, it says, "Farms in the United States and to the heading of the Mexican Canal," right?
- 25 A. Yes. That's what it says.

1 All right. Now, let's look at D2. So if we Q. 2 look at, I think it's -- yeah, there we go. Here we 3 say, "The amount" -- it says, "The amount available for irrigation to U.S. river headings is determined 4 5 from Curve D2, enclosed as Exhibit No. 3." Do you see 6 that? 7 Α. Yes, I see that.

- Q. Let's go take a look at D2. So that's on
 Page 41 of this document. And, again, hard to read.
 I apologize. You look in the lower right-hand corner,
 you can see it says, "Curve D2." Do you see that?
 - A. Yes, I see that.
 - Q. You recognize this as the D2 curve?
- 14 A. That looks correct.

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- Q. Okay. Now, let's turn back to Page 9, and let's look this time down below there at -- at Section B, which is entitled, "Determination of Allotment for Full Supply." Do you see that?
- 19 A. Yes, I see that.
 - Q. And in the first paragraph, they're telling you that a full supply is based on total delivery of 482,800 acre-feet to U.S. farms. Do you see that?
 - A. I see that.
 - Q. And we just looked at the origin of that number on the previous page, right?

A. Yes.

Q. And then if you look at those two next paragraphs, it goes onto tell you that, "This translates into a release from Project storage of 780,800 acre-feet." Do you see that?

- A. Yes, I see that.
- Q. And then we can see in the last paragraph there, it tells you that, "From Curve D2, the historic net diversions at Headings, U.S. and Mexico, for a release of 780,000 is 902,000 acre-feet." Do you see that?
 - A. I do see that.
- Q. All right. So I want to turn to Page 10 now because they have a helpful illustration here, and let's just blow out the whole page if we can. Up to there. Perfect. Here you can see at the top, it says, "Allocation for a full supply," right?
 - A. That's what it says.
- Q. You understand this to be an example for 100 percent allotment?
 - A. Also what it says.
- Q. You can see at Step 4, "The amount available for diversions in this full supply is -- to Mexico is 60,000 acre-feet." You see that?
- 25 A. Yes.

1 That's consistent with your testimony 0. 2 earlier? 3 Α. Yes. 4 Q. You can see for EBID, at least under this 5 operating agreement, a full supply was 478,037 6 acre-feet, right? 7 Α. I see that. 8 And then for EP1, the full supply, at least 9 under this operating agreement, was 363,963 acre-feet. 10 Do you see that? 11 I see that. Α. 12 Okay. We can take down this document now, Q. 13 and let's put up New Mexico 697, which was admitted 14 yesterday. And let's look at the title page first. 15 Let me just ask you, Ms. Estrada-Lopez: Do you 16 recognize this document, which is entitled, "Rio 17 Grande Project Water Supply Allocation Procedures"? 18 Α. I see it. 19 Is this a document that is in the Bureau of Q. 20 Reclamation files? 21 Α. Yes, it is. 22 I'll just -- for the Court's understanding, Q. 23 you can see that the very next page of this document, 24 which has the Bates stamp of Page 2, is actually

labeled Page 3. Again, just by way of explanation,

I'm not aware of, and certainly Mr. Dubois or Ms.

Klahn can correct me if I'm wrong. It's not an
incomplete copy; it's simply that we have not found
anybody who has the other pages of those -- of that
document. But at any rate, this document has already
been admitted.

So I -- just to confirm a couple of other things here and compare it to that last document we just looked at, Ms. Estrada-Lopez. So here we can see under the second paragraph here, Paragraph 2A, it says, "Allocation Procedure," right?

- A. Yes, that's what it says.
- Q. Yeah. And then let's back out of there, and then we're going to look at -- if -- if under the procedure, we capture that second paragraph that starts with "1906." And here it's telling you -- you'll recognize some similar language. For example, we see there it says, "The first allocation to lands in the United States was made in 1951." You see that?
 - A. Yes, I see that.

- Q. We saw that language in the last document, as well, correct?
 - A. Yes, we did.
- Q. And then you can see in the next sentence, it says, "An analysis done at that time established 3.024

1 acre-feet per acre, applied to lands, as a full supply 2 to U.S. farms." Do you see that? 3 Α. Yes, I see that. 4 0. And -- and that's pretty similar to the 5 language we saw on the previous document, correct? Yes, it's similar. 6 Α. 7 Q. And -- but here's where it gets a little bit 8 They then say that that full supply is different. 9 468,720 acre-feet. You see that? 10 I see that. Α. 11 And that's a different number than we saw on Q. 12 the 1985 document, right? 13 Α. I don't a hundred percent remember. 14 Fair enough. The record will reflect that. 0. 15 But we now see in the parens, you have 3.024 acre-feet 16 per acre times, and I think here is where the 17 difference comes from, it's 155,000 acres. Do you see 18 that? 19 Α. Yes. 20 And that 155,000 acres, that's consistent 21 with the total authorized acreage; is that right? 22 I have to go back and look at the contracts. Α. 23 It doesn't sound wrong but --24 Q. All right.

It's a lot of questions.

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Α.

- Q. That -- that's a fair point. All right. We can put this document down then. And I'm just -- now, you indicated you weren't exactly aware of the procedures that were used to allocate water between 1980 and 2005, but let me ask you this: Are you aware that during that time period, approximately 57 percent of the acreage -- Project acreage was in New Mexico, and approximately 43 percent was in Texas?
- A. My understanding is based on the contracts that the authorized acreage, that's the split.
- Q. And are you aware that between 1980 and -- and 1985, the allocation of water was done on the basis of the respected authorized acreage in each district?
- A. I have seen some allocations during that time period that did that.
- Q. Let's take a look at Colorado 214, and this is another document that's already been admitted.

 Well, actually, I apologize for going backwards, but I want to show you the origin of these numbers, so I don't know if Ms. Ferguson can actually call up at the same time that Colorado 214 and also New Mexico 697, and then I'll ask that you put up Page 4 at the top of the page of New Mexico 697. Yeah. We can just go under the allocation for a full supply. We looked at

this for the 1985 document, and I should have showed 1 2 you this, Ms. Estrada-Lopez, for 1991, as well. 3 you can see for -- based on that document, the New 4 Mexico 697, the full allocation to EBID there was 5 494,979 acre-feet. Do you see that? 6 Α. Yes. 7 And it actually tells you, and this goes to Q. 8 our previous question, that it's -- represents 56.774 9 percent of 871,841 acre-feet. Do you see that? 10 Α. Yes. 11 And then we can see the full supply, at least 0. 12 under that document, New Mexico 697, to EP No. 1, was 13 that 43.226 percent of the 871,841. Do you see that? 14 Α. Yes. 15 0. And for a total to EP1 of 376,862. Do you 16 see that? 17 Α. Yes. 18 All right. Now, we can see the highlighted Q.

- portion of Colorado 214 below there, and it tells you, "The following is the final allocation for the Rio Grande Project water supply." Do you see that?
 - Α. Yes.
- We can see Mexico was at 60,000, and you've Q. said that's a full supply for Mexico, right?
- Α. Yes.

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Q. Then we can see EBID received 494,979 acre-feet, which we can see matches that amount from the previous document from the New Mexico 697, right?

A. Yes.

Q. And, also, if we look at the EP No. 1 allocation from 2002, it was 376,862, which also matches the EP1 allocation from the New Mexico 697, right?

A. Yes.

Q. And then if we back out of those two documents here and go over to Colorado 214 and -- and highlight the second full paragraph there -- yeah, that one -- and we can see here that in this letter, it's being indicated that -- maybe we need to go to Page 2. Yeah, there you see at the top paragraph that's bolded. Here it says that, "This final allocation" -- meaning the one we just looked at -- "represents a full supply." You see that, and it tells you the increase amount for 2002?

A. Yes, I see that.

MR. DUBOIS: Your Honor, I'm going to object to this line of questioning at this point. I mean, Mr. Wechsler is not really asking any questions. He's presenting documents, and the documents speak for themselves. But there are no questions that are

within the scope of Ms. Estrada-Lopez's testimony yesterday, so I'm going to object to the line of question and just sort of reading in documents.

MR. WECHSLER: Well, I do think that the -- the allocation was clearly within her testimony, and we're, through this witness, exploring and showing you the relevant documents.

MR. DUBOIS: The allocation she talked about is what she does as far as allocation, and Mr. Wechsler is simply reading in documents that speak for themselves.

MR. WECHSLER: I understand that
Reclamation is not comfortable with these allocation
procedures, but they were the ones they adopted during
this period.

JUDGE MELLOY: I'm going to overrule.

I'll let the witness answer.

Q. (BY MR. WECHSLER) All right. And, actually, we're -- we're done with those two exhibits, and we're going to move on, now, to the -- the operating agreement. So we've covered the period prior -- the D2 period. We've covered, now, that period between 1980 and 2005, so, now, we're going to move to that period of the operating agreement. Can you remind us, Ms. Estrada-Lopez, when was the operating agreement

adopted?

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- It was signed in 2008. Α.
- So before we move to the operating 0. agreement, I want to look at some of the positions of the Rio Grande Compact Commission on the allocations, and -- and I want to start with Joint Exhibit 391, which has already been admitted. I want to start with just the first page of that document. You can see this is Rio Grande Compact Commission report from 2001, and you indicated you had reviewed some past Compact Commission documents; is that right?
 - Yes, I have. Α.
- 0. Let's find out if this is -- as I said, it's already admitted, but let's find out if this is something that you have reviewed. Let's turn to Page 16. And we're going to use that first column -- this is one of the resolutions of the Rio Grande Compact Commission. You're familiar with resolutions being passed by the Rio Grande Compact Commission, Ms. Estrada-Lopez?
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 - Α. Yes, I know they do that.
 - So let's look at what's being resolved Q. Yeah. Here we can see it says that, "The Rio Grande here. Compact Commission hereby requests that the Bureau of Reclamation work cooperatively with the engineer

advisors to develop procedures for determining the
annual allotments of water supply in accordance with
the Rio Grande Compact." Did you see that? Have you

A. I think so.

seen that before?

- Q. Is this something that you consider as part of your allocation development?
- A. No. I follow the operating agreement procedures.
- Q. All right. Let's turn to Page 12 of this same document. And here, let's just highlight that first couple paragraphs there. You can see this is entitled a, "Memorandum of Understanding between the Rio Grande Compact Commission and the United States Bureau of Reclamation." We can see there below, "To describe the duties, roles and responsibilities of each agency in the water accounting, reporting and documentation of the waters of the Rio Grande Basin above Fort Quitman, Texas, in accordance with the Rio Grande Compact." Do you see that?
- A. I see that sentence.
 - Q. Okay. Then let's turn to Page 15. In that left-hand column, which I'll just represent because you don't have the whole document in front of you, this is the signature part of that document, and you

1 can see this was signed by Ken Maxey of the U.S. 2 Bureau of Reclamation, dated March 21st, 2002. You're 3 familiar with who Ken Maxey is? 4 Α. Yes. I've heard his name. 5 At the time, he was the area manager? 0. 6 Α. That's my understanding. 7 All right. Well, let's turn then to Page 15, Q. 8 which is right before this signature page. I'm sorry. 9 Page 14. And let's go ahead and highlight that whole 10 Section 5.0. Here you can see under that 11 heading, "Protocols," it's entitled, "Protocols for 12 Implementing Future Changes to Approved Methods," 13 right? 14 That's what it's titled. Α. 15 In the last sentence of that first paragraph, 0. 16 it says, "No accounting adjustments will be 17 implemented without the prior approval of the 18 Commission." Do you see that? 19 Α. I see that. 20 Is this something that you take into 0. 21 consideration as you're developing allocations? 22 MR. DUBOIS: Objection; lack of 23 foundation as to her familiarity with this particular 24 document.

Have you ever seen this

(BY MR. WECHSLER)

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1 document, Ms. Estrada-Lopez? 2 I have seen this document. 3 0. And do you take it into account when you do 4 your allocations? 5 Α. I'm just following the procedures. I don't 6 know what this is referring to without reviewing the 7 entire document. 8 Fair enough. So -- but I understand then the 0. 9 answer to my question is no, it's not something that 10 you have considered when you've developed allocations? 11 Α. No. 12 Do you know if the Rio Grande Compact Q. 13 Commission approved the operating agreement? 14 Α. I've never seen anything that said they did. 15 Let's turn to the operating agreement. 0. 16 That's Exhibit 2373. You looked at this yesterday. 17 It's been admitted, and you recognize this as a copy 18 of the 2008 operating agreement? 19 Α. Yes, I do. 20 Now, the two primary changes from the 0. 21 previous allocation methods were the separate district 22 carryover accounts, and that's present in the 23 operating agreement, right? 24 Α. The -- it talks about carryover of allocation 25 balance.

We'll talk about that in -- in some detail in 1 0. 2 And -- and, also, the use of the diversion 3 ratio, which is also identified in the operating 4 agreement, right? 5 Yes. That's in the operating agreement. Α. 6 Q. Okay. Let's turn to Page 5, and we're going 7 to highlight here Section 2.5. And really the last 8 sentence here is what we're going to look at. Here it 9 tells you, "The amount of annual allocated water shall 10 be determined using the D2 equation for EPCWID," 11 right? Do you see that? 12 Α. Yes. 13 That's consistent with your understanding? 0. 14 Α. Yes. 15 Then it says, "Using equation 2-1 for the Q. 16 United States, pursuant to the Convention of 1906," 17 and that's consistent with your understanding? 18 I don't know what equation 2-1 is without Α. 19 looking in the document. 20

- Q. Is -- for the United States, pursuant to the Convention, is it the D1 equation that determines that amount of water?
 - A. 60,000 or the D1 equation.

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Q. All right. And then this says, "And using the diversion ratio, parens, ratio of the amount of

1 water charged to the amount of water released, for 2 EBID in accordance with Tables 1 through 4 herein." 3 Do you see that? 4 Α. Yes, I see that. 5 0. And that's consistent with your 6 understanding, right? 7 Α. Yes. 8 Let's turn to Table 2 -- let's turn to Table 0. 9 1, which is on the next page. You can -- you can --10 it's fine. Table 2 is also fine. And -- and you 11 recognize this as a -- a copy of basically the 12 allocation spreadsheet, as it looked in 2008? 13 Α. Yes. This is a table in the operating 14 agreement. 15 0. Right. And it parallels the allocation 16 spreadsheet that you work with, right? 17 Yes. It's based off of this. Α. 18 And so each year, you -- you've actually --0. 19 there have been some lines added to the allocation 20 spreadsheet since 2008; is that right? 21 Α. That's correct. 22 But every year, you use an Excel spreadsheet Q. 23 in developing the initial allocation? 24 Α. Yes, I do.

And it's based essentially on this

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spreadsheet from the operating agreement?

A. Yes.

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- Q. And if you turn to Page 8 of this same document, and let's -- can we pull that out just a little bit? In here, you can see, this is a description of the values and calculations from that table that we were just looking at, right?
 - A. Yes, it is.
- Q. Again, some of these values and calculations have been changed; many are still the same from 2008, right?
 - A. Yes. Most are still the same.
- Q. Okay. So, now, let's talk a little bit about the allocation committee. Now, the allocations to Mexico, EP1, and EBID are done by the allocation committee, right? Ultimately they're approved by the allocation committee?
 - A. I would not say that.
 - Q. What would you say?
- A. The allocation to Mexico is done by the United States and then it's put into the calculation for the initial allocations to the districts, and that part is approved by the committee.
- Q. All right. So you -- so the initial allocations are done by Reclamation, and you testified

1 you do that, right? 2 Α. Yes. 3 And then it -- that initial allocation is 0. 4 submitted to the allocation committee? 5 Α. Yes. 6 And ultimately, the allocation committee Q. 7 approves of the final allocations? 8 Α. Yes. 9 And action by the allocation committee, if I Q. 10 understood you correctly yesterday, must be unanimous? 11 Α. Yes. 12 Now, if we look at Exhibit US-547, just for Q. 13 purposes of creating a record here, this is the 14 memorandum that ultimately delegates to you authority 15 to be on the allocation committee, right? 16 Α. Yes. 17 And that's already been admitted -- admitted. 0. 18 Now, you first became a member of the allocation 19 committee in 2016? 20 I have to look at the -- what I wrote in my 21 report or something, but that sounds right. 22 Q. Somewhere -- somewhere in -- around 2016? 23 Α. Yeah. 2.4 Q. Now, I think you already testified that you 25 replaced Bert Cortez as the Reclamation

1	representative?
2	A. Yes, I did.
3	Q. And to your knowledge, other than you,
4	Mr. Cortez is the only person who's ever been on the
5	allocation committee for Reclamation?
6	A. That's correct.
7	Q. The other two members of the allocation
8	committee, again, based on your testimony yesterday,
9	is a representative of EBID, which is Dr. King, right?
10	A. Yes.
11	Q. And a representative from EP1, and that's
12	Dr. Blair, right?
13	A. Yes.
14	Q. To your knowledge, Dr. King and Dr. Blair are
15	the only members who have ever sat on the allocation
16	committee for EBID and EP1 respectively?
17	A. Yes.
18	Q. Okay. Now, the allocation committee has no
19	other members?
20	A. No.
21	Q. So there's no representative from either the
22	State of Texas or the State of New Mexico?
23	A. No.
24	Q. The and the allocation committees are not
25	open to the publice is that right?

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- A. No.
- Q. Okay. So, now, turning to the process for developing the allocations under the operating agreement, let -- let me just ask you this: Will you agree with me that it's a complicated process?
 - A. Yes.
- Q. In fact, you've testified you're responsible for the initial allocations, but you don't use all of the lines in the allocation spreadsheet, do you?
 - A. I don't know what you mean by use them.
- Q. Well, you -- you don't actually use them in developing the allocations?
- A. If they're on my spreadsheet, then that is what I send out to the allocation committee, and then that's what the allocation committee approves for the allocation.
- Q. Let me ask you this then: There are some lines within the allocation spreadsheet that you don't know why they're there?
- A. I did not -- I was not part of the development of the original allocation spreadsheet so I can't speculate all the reasons why something would be there.
- Q. So is that a yes to my question, you don't know why all of the lines were there?

- A. I do not know why all the lines are there.
- Q. All right. To help us understand a little bit about the process, I'll -- I'll ask you to look at US Exhibit 563, and this has been admitted. I'm going to turn to Page 2 of this document and look at the figure there. So -- there we go. So if you look at the Step 1, Step 2, Step 3, Step 4, et cetera, does that accurately describe the current process for developing the allocations?
 - A. Yes. That's a generalization of it.
- Q. And then let me -- let me point you to, because there are now some new equations in the spreadsheet, let -- let's look at Page 3 of this US-563 and call that out. Here you can see this says, "Rio Grande Project Allocation Table, Data and Calculations Used to Determine Rio Grande Project Allocations." Do you see that?
 - A. Yes, I see that.
 - Q. You recognize --

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JUDGE MELLOY: Mr. Wechsler, can I interrupt you for just a second?

MR. WECHSLER: Of course.

JUDGE MELLOY: This -- this exhibit raises an issue we've noticed with a couple of the exhibits. There -- it's labeled, "Highly

confidential." I just wanted to make sure that none 1 2 of the exhibits are being admitted under any kind of 3 seal or confidential status; is that correct? 4 MR. WECHSLER: That's my understanding, 5 Your Honor. I'll certainly let Mr. Dubois speak to 6 that issue considering it's a U.S. document. 7 MR. DUBOIS: Your Honor, this was --8 this was disclosed in discovery, and we are not 9 claiming any -- any need to have this under seal. 10 JUDGE MELLOY: And as I understand it. 11 there's other documents that have similar notations on 12 them. As I understand it, unless otherwise indicated, 13 any document that's admitted is not admitted under 14 seal or subject to any type of protective agreement at 15 this time; is that everyone's understanding? 16 MR. WECHSLER: That's my understanding. 17 JUDGE MELLOY: Okay. Any disagreement. 18 MR. DUBOIS: Not that I know of, Your 19 Honor. 20 Okay. All right. JUDGE MELLOY: Thank 21 you. 22 MR. WECHSLER: And just by way of 23 explanation, Your Honor, during depositions, we did 2.4 learn from some of the deponents that they simply had 25 a practice of labeling somewhat sensitive documents

1 with the highly confidential label. 2 JUDGE MELLOY: All right. Very good. 3 You may proceed. 4 MR. WECHSLER: Thank you. 5 0. (BY MR. WECHSLER) All right. So -- and so I 6 think, Ms. Estrada-Lopez, just to pick up that train 7 of thought, did you already answer the question, this 8 -- this table, to the best of your understanding, 9 reflects the -- the current calculations used to 10 determine -- to determine Rio Grande Project 11 allocations; is that right? 12 That looks correct, but I would have to look Α. 13 at my spreadsheet and all the equations to make sure 14 it was exact. 15 0. All right. Well, let's look at one of your 16 spreadsheets now, and -- and what I want to do is look 17 at -- this is New Mexico 1171, and it -- it has the 18 designation A, Your Honor -- I'm sorry. 1711. 19 1711-A. 20 Mr. Wechsler? Α. 21 Yes, ma'am. Q. 22 THE WITNESS: Before we start this 23 section, can I have a five-minute break, Your Honor? 2.4 MR. WECHSLER: You're on mute, Your 25 Honor.

1 JUDGE MELLOY: Why don't we take our 2 recess at this time? We'll make it a 20-minute break, 3 and we'll come back at 1:10. All right? 4 THE WITNESS: Thank you. 5 MR. DUBOIS: Very good, Your Honor. 6 (Recess.) 7 JUDGE MELLOY: All right. We will get 8 You may -- you may continue, Mr. Wechsler. started. 9 MR. WECHSLER: Thank you, Your Honor. 10 0. (BY MR. WECHSLER) Ms. Estrada-Lopez, before 11 the break, I was just going to ask you to look at New 12 Mexico Exhibit 1711A, and I was going to explain to 13 the Special Master that there was originally an 14 objection to 1711. We've worked out with the other 15 parties that just a portion of that Exhibit 1711 could 16 be admitted, and it's the electronic version of one of 17 the tabs that was called Final 2018 Allocation, and 18 we've identified that as Exhibit 1711A -- New Mexico 19 1711A. 20 JUDGE MELLOY: Do we have that exhibit? 21 MR. WECHSLER: It's on the screen, Your 22 Honor, and I believe it was disclosed last night or 23 two nights ago. 2.4 JUDGE MELLOY: All right. I'm going to 25 leave it up to New Mexico then to supply a hard copy

1 of that exhibit to us. 2 MR. WECHSLER: Understood. 3 JUDGE MELLOY: Okay. So just for the 4 record then, 1711A, as in apple, will be admitted. 5 MR. WECHSLER: Thank you, Your Honor. 6 Q. (BY MR. WECHSLER) And so, Ms. Estrada-Lopez, 7 are you able to see Exhibit 1711A, the final 2018 8 allocation spreadsheet on your screen? 9 Α. Yes, I am. 10 0. And -- and this is what those spreadsheets 11 look like when you're doing those allocations, right? 12 Α. Yes. 13 And, in fact, this was one of your 0. 14 spreadsheets from 2018? 15 Α. Yes, it is. 16 Q. And we can see what it says is -- the tab 17 says in the lower left-hand corner says, "Final 2018 18 Allocation, and you can see at the top, the date is 19 as of April 1, 2018. Do you see that? 20 Α. Yes. 21 And -- and the reason I think -- and, 0. 22 actually, let me pose that as a question. Is the reason that the final '18 -- 2018 allocation was the 23 2.4 same as for April 1st, 2018, because there were no

changes that warranted changes to the allocation?

A. I don't remember offhand, but that is typically what I would do.

- Q. All right. So -- so if we recall back on that US-563 -- and we don't have to go back to it -- but the Step 1 is for data inputs, and -- and so the information that goes into this spreadsheet comes from one of the districts, Reclamation, or the Rio Grande Compact Commission; is that correct?
 - A. Yes.

2.4

- Q. There are a few lines here that require some discretion or level of judgment, right?
 - A. Yes.
- Q. Step 2 is determining the storage and release amounts. Do you recall that? We can look at it again if you want, but is that a step that you would then go through as you're doing the allocation is determining the storage and release amounts?
 - A. Yes.
- Q. Okay. So let's look at this spreadsheet then, and Line 4 of New Mexico's 1711A, we're looking there at Line 4, and that is the total Rio Grande Project Storage, right?
 - A. Yes.
- Q. And that's the amount that is in Elephant Butte and Caballo combined?

1 Α. Yes. 2 And the next line that's important for the 0. 3 allocations is the total usable water available for 4 release, and that's shown in Line 8, right? 5 Α. Yes. 6 And if we click on the box there for Line 8, Q. 7 which is C8, you can see the Excel formula, right? 8 Yes, I can. Α. 9 So this includes -- it's the sum of the total 0. 10 project storage, the credit waters, the San Juan-Chama 11 water, and the water already released from storage, 12 right? 13 Α. Yes. 14 Now, also important for determining the 0. 15 allocations is understanding the carryover obligation, 16 right? 17 Α. Yes. 18 And that's shown in Line 9, right? Q. 19 Α. Yes. 20 And the reason that's important is because 0. 21 carryover is excluded from the current year 22 allocations? 23 Α. It's not quite right. 2.4 Q. Well, let's look at the formula then for the 25 -- the total usable water available for release is

seen in Line 8, right? And then we see the total usable water available for current year allocation is in Line 11; is that right?

A. Yes.

- Q. And there, you see that that number is the -- the minimum of either 790,000 acre-feet, right?
 - A. Yes.
- Q. Or Lines 8, which is the total usable water available for release, plus Line 9, which is the carryover obligation, right, plus Line 10, which is the estimate of end-of-year adjustment -- minus 9 -- I think I said plus, so to be clear, that total usable water available for current year allocation in Line 11 is the minimum of 790 or Line 8, the amount available for release minus Line 9, which is the carryover obligation, right?
- 17 A. Yes.
 - Q. And then C10 is just the sort of, what you call, the end-of-season adjustment project water for reservoir evaporation or dead storage, right?
 - A. Yes.
 - Q. So you take those together, the total usable water available for the current year allocation is that amount available for release shown in Line 8, and you're deducting the carryover obligation, right?

1 Α. Yes. 2 And so if we look then a little more 0. 3 carefully at Line 9 and click on the box there, again, 4 you can see the formula at the top, right? 5 Α. Yes. And -- and it looks at the amount of unused 6 0. 7 water from the previous years, which is Lines 12 for 8 EBID and Line 13 for EP No. 1, right? 9 Α. Yes. 10 So the carryover in this year for EBID was 0. 11 11,239 acre-feet shown in Box C12, right? 12 Α. Yes. 13 And the carryover for EP1 was 202,102 0. 14 acre-feet, right? 15 Α. Yes. 16 Q. But you don't just add those, which you can see just ball parking it would total somewhere around 17 18 213,000 acre-feet, you also apply the diversion ratio 19 to that carryover, right? 20 Α. Yes. 21 And the diversion ratio we can see here in 0. 22 this spreadsheet is in Line 28, and so this year --23 and we'll talk more about the diversion ratio. You 24 can see there it's the 0.904597, right?

25

Α.

Yes.

1 And as you talked about -- testified Q. 2 yesterday, that diversion ratio is the ratio of 3 allocation charges to the releases from Caballo, 4 right? 5 Α. Yes. 6 And -- and so in -- in that way, if I 0. 7 understood you correctly, it can be thought of as a measure of the river efficiency or the efficiency of 8 9 the Project, right? 10 I don't think I said that. That's proportion Α. 11 that's applied to the volume that's released to 12 estimate how much can be delivered. 13 You don't consider the diversion ratio to be 0. 14 a measure of the efficiency of the Project? 15 It's not a measurement of the Project 16 efficiency. 17 Is it a way of evaluating the Project 0. 18 efficiency? 19 Α. Yes. 20 Now, again, we'll talk about the diversion 0. 21 ratio more in a moment, but a diversion ratio of one 22 means that every acre-foot of water released from Caballo, an acre-foot of water is charged to the 23 24 project accounting, right?

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Α.

Yes.

And that means if a diversion ratio is less 1 Q. 2 than one, it results in additional water being devoted 3 to the Line 9 carryover obligation, right? 4 Α. Yes. 5 And because it's part of that carryover 0. 6 obligation, it's not available for current year 7 allocation? 8 Α. Yes. 9 All right. So next in determining the 0. 10 allocation, you -- you have to determine that total 11 usable available water for current year allocation, 12 That's Line 11. We talked about that. right? And I 13 want to mention two things about that Line 11. 14 first is, if we click on that Box Cl1, the maximum of 15 water -- amount of water that can be available for 16 allocations is that 790,000 acre-feet, right? 17 Well, that's what's in the formula. Α. 18 Right. And so you follow this formula when 0. 19 you do the allocations, correct? 20 Α. Yes. 21 And so under the formula, the maximum amount 0. 22 available for allocations is 790,000 acre-feet, right? 23 Α. Yes. 24 0. And that's consistent with the Rio Grande

Compact's language about the normal release of 790,000

acre-feet?

- A. Yes. It's in there, as well.
- Q. Now, the second thing about this Line 11, because the water available for allocation at Line 11 is the water available for release minus the carryover obligation, this, again, emphasizes that carryover reduces the amount of water available for allocation, right?
 - A. That's not quite right.
- Q. Well, it -- it reduces the amount for current year allocation?
 - A. Yes.
- Q. And so finally for allocation purposes, we need to determine the current usable water, and that's shown in Line 17, right?
 - A. Yes.
- Q. And if we click on the box for Line 17, you can see there the formula. The current usable water can be thought of as the amount of water that Reclamation thinks will be able to release in that year; is that right?
 - A. Yes.
- Q. All right. So, now, let's turn to Mexico.

 So the Step 3 from US-563 talked about the allocation
 to Mexico as Step 3, so let 's talk about that now and

how that allocation is done under the operating 1 2 agreement. So to do that, you first have to determine 3 the D1 delivery, which is Line 19, right? 4 Α. Yes. 5 And the D1 delivery is the total amount of 0. 6 the D1, in other words the delivery to all lands and 7 the -- the heading for the Acequia Madre? 8 That's the Y axis from D1 equation. Α. Yeah. 9 Understood. And so -- and so the releases 0. 10 would be that amount of water you release to get that 11 amount of water to those head gates -- I'm sorry -- to 12 the lands and the Acequia Madre head gate? 13 Α. Based on that historical relationship, yes. 14 0. And that D1 curve is the same D1 curve that 15 has historically been used? 16 Α. Since I've been doing it, yes. 17 0. Now, that amount in Line 19, the D1 delivery, 18 will change depending on the amount of water that's 19 released or that's assumed to be released for purposes 20 of the equation, right? 21 Α. Yes. 22 Now, for the Mexico allocation, the D1 Q. 23 equation, the -- the release, is the current usable

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water from Line 17, right?

Can we highlight 19?

Α.

1 Q. 19? Sure. 2 Α. Yes. 3 And so that line -- and -- but we'll see in 0. 4 -- in a moment that the amount assumed to be released 5 for purposes of the D2 curve is a -- is a different 6 number, right, it's not that Line 17? 7 Α. Correct. And so we see in D1 delivery, Line 19 for 8 0. 9 this year, that total delivery applying the curve to 10 Line 17 gives you 331,933 acre-feet, right? 11 Α. Yes. 12 And that's the amount that's estimated could Q. 13 be delivered to lands and the Acequia Madre? 14 Α. Yes. 15 So, next, you have to figure out the portion 16 of that Line 19 that should be allocated to Mexico, 17 correct? 18 Α. Yes. 19 And so Mexico -- and you can click on Line --Q. 20 or Box C20 for this, and we can see that Mexico is 21 allocated the lesser of either 60,000 acre-feet or 22 approximately 11 percent of the total D1 delivery, 23 right?

Now, I do have one question about that and

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Α.

Q.

Yes.

this came from some of the things that you said
yesterday and I just want to understand that better.
So I understood you yesterday, you were using
Demonstrative Slide No. 17 to discuss the Mexico
allocation. Do you recall that?

A. Yes.

- Q. And you indicated that the way you determine whether there is an extraordinary drought is whether there is 600,000 acre-feet of water available for release; is that right?
 - A. Yes.
- Q. And so when you're doing that, are you talking about the Line 8, the total usable water available for release?
- A. I would probably use Line 17, because we would not release the evaporation in that storage.
- Q. All right. Fair enough. So we'll use Line 17. So this is where my confusion comes from. I'm going to leave this exhibit and come back to it in a moment, but if we turn to Exhibit US-200, and let's go to Page 3, and this has already been admitted. Let's highlight -- yeah, that portion will capture well enough. So we can see in this example, the current usable water is 888,423 acre-feet. You see that?
 - A. Yes.

1 So that's above that 600,000, and if I 0. 2 understood your testimony yesterday, I mean, I 3 understood you to be saying under those circumstances, 4 it's not an extraordinary drought, and we're not going 5 to reduce the portion to Mexico. Did I have that 6 right? 7 Α. That's how I do it now. 8 We can see here, though, in Line 19 in this 0. 9 year, Mexico did not receive 60,000 acre-feet, right? 10 Α. That's what it says. 11 And so -- well, let -- we can go to another 0. 12 one. Let's go to Page 9. This is more recent. This 13 is 2016. Were you doing these initial allocations in 14 2016? 15 I believe so. 16 Q. You can see again, Line 17, that current 17 usable water, you can see the total amount is above 18 the 600,000 acre-feet, right? 19 Α. Yes. 20 But when you look at Mexico allocation in 0. 21 Line 20, again, it's reduced from the 60,000 22 acre-feet? 23 Α. Yes. 24 So is that just a very recent change? Q.

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Α.

Yes.

When did --1 Q. 2 Discussed it with IBWC. Α. 3 When was that change made? 0. 4 Α. I don't recall. 5 Okay. Let's turn back then to Exhibit 1711A, 0. 6 and let me just ask you this. It may not be reflected 7 in this spreadsheet because it's 2018. So did the 8 formula in Line 20 change as a result of that change 9 in the procedure? 10 Α. No. 11 All right. Okay. Now, thinking then about Q. 12 the 2018, in this year, Line 20, Mexico was allocated 13 37,670 acre-feet, right? 14 Α. Yes. 15 And once you have that number, now, you're --Q. 16 that's when you do that status check to ensure you're 17 in compliance with the treaty that we talked about 18 earlier, right? 19 Α. Yes. 20 And you do that status check every year? 0. 21 Α. Yes. 22 We can see the status check for this year in Q. 23 this spreadsheet on the right-hand side of New Mexico 24 Exhibit 1711A, right? 25 Α. Yes.

1 Okay. So let's look at that then. So the 0. 2 first thing you do, and I'm looking here at Box L9. 3 You -- you figure out the water supply to U.S. 4 irrigation lands, and that takes the number from the 5 D1 delivery in Line 19, and it subtracts out the 6 portion allocated to Mexico, right? 7 Α. Yes. 8 That gives you, you can see in Line P9, 0. 9 294,264 acre-feet, right? 10 Α. Yes. 11 Now, you take that number, and you plug it Q. 12 into K12, and that's the amount allocated to the water 13 supply to U.S. district lands, right? 14 Α. No. 15 0. The 294,264 is not the water supply to U.S. 16 irrigation's district's lands? 17 It's not been allocated. Α. 18 Okay. The water supply to U.S. irrigation Q. 19 lands, right? 20 That's what it says. Α. 21 0. Yeah. And then you divide that number by 22 155,000, right? 23 Α. Yes. 24 And that represents the amount of acreage Q. 25 within the Project, right?

1 Α. Yes. 2 Which gives you an amount per acre of 1.89847 3 acre-feet per acre, correct? 4 Α. Yes. 5 Then in Line K13, you divide that number, 0. 1.89847 acre-feet per acre, you divide that by the 6 7 3.024 acre-feet per acre, right? 8 Α. Yes. 9 And that 3.024, as we looked at earlier, Q. 10 represents that full supply that was determined back 11 in the 1950s, right? 12 Α. Yes. 13 Which gives you a percentage of the full 0. 14 supply allotments to U.S. lands, correct? 15 Α. Yes. 16 Q. And that percentage in this year, 2018, happened to be 62.78 percent, right? 17 18 Α. Yes. 19 Okay. So, now, you compare that to the 20 amount of -- for -- for Mexico, the percentage for 21 Mexico, right? 22 Α. Yes. 23 We can see that in K19, so you're taking the 0. 24 Mexico current diversion allocation of 37,670 25 acre-feet and dividing it by the full supply of 60,000

1 acre-feet, right? 2 Α. Yes. 3 0. Giving you a number of 62.78 percent, right? 4 Α. Yes. 5 Then when you compare those two, the 0. 6 percentage for the U.S. lands and the Mexico lands, it 7 turns out they're the same, and you know you're in 8 compliance with the treaty, right? 9 Α. Yes. 10 And, again, that's a check you're doing every 11 year? 12 Α. Yes. 13 Okav. Let me -- let me just ask you this: 0. 14 Do you compare the allocation to lands to the -- the 15 actual allotments in EBID and EP No. 1? 16 Α. T do not. I want to get you to look at another exhibit 17 0. 18 before we look at those allotments, and that's Joint 19 Exhibit 426. 20 MR. WECHSLER: Which, again, Your Honor, 21 I understand that Texas and the United States have 22 withdrawn their objection to this. 23 JUDGE MELLOY: Exhibit 426 will be 24 admitted -- Joint Exhibit 426. 25 0. (BY MR. WECHSLER) All right. And so if we -- we look at this, this is a contract that was entered into by the Districts and Reclamation, right? If you want, we can go to the next page, and you can see -- well, scroll out so she can see all of it. Yeah. You can see the signatures of EBID, EP1, and the assistant secretary of the Interior, right?

A. Yeah.

- Q. And then if you go back to Page 1, and we are going to look at this language we've looked at -- or in this case we've looked at in the fourth paragraph where it says, "It is further agreed." And we see here that in the -- it says that, "It's agreed that in the event of shortage of water for irrigation in any year, the distribution of the available supply in such year shall so far as practicable be made in the proportion of 67 divided 155 thereof to the lands within El Paso County Water Improvement District No. 1, and 88 divided by 155 to the lands within the Elephant Butte Irrigation District," right?
 - A. That's what it says.
- Q. 67 over 155 gives you approximately 43 percent?
 - A. Yes.
- Q. 88 divided by 155 gives you approximately 57 percent?

1 Α. Yes. 2 So this is saying in times of shortage, the 3 distribution of available supply has to be 43 percent 4 to EP1 and 57 percent to EBID? 5 MR. DUBOIS: Objection; misstates the 6 document, which speaks for itself. 7 JUDGE MELLOY: I'll sustain that. The 8 document speaks for itself. 9 MR. WECHSLER: I'm happy to stand on the 10 document. 11 (BY MR. WECHSLER) Let's compare it then, 0. 12 Ms. Estrada-Lopez, to the actual allotments, which 13 we're going to look at in New Mexico Demonstrative 14 Exhibit 3. And so just as a reminder for the Court, 15 that amount in 2018 was 1.89847 acre-feet per acre in 16 the Project. Do you recall that, Ms. Estrada-Lopez? 17 Α. Yes. 18 We can look at 2018, and -- and assuming this 19 is accurate, and I know you may not know off the top 20 of your head, but you can see here at least this is 21 reflecting an allotment in 2018 for EP1 of 4 acre-feet 22 and for EBI D of less than 1 acre-foot, and that's --23 those are different numbers than 1.89847, right?

And also different, and maybe this is

Those are different numbers.

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Yes.

apparent from the figure, the amount to EP No. 1 in
every year is higher than that allotted to EBID lands,
right?

- A. That's what's shown in this figure.
- Q. Do you have any information to suggest that these -- the information shown in this figure is not correct?
- A. No. I have not evaluated the information that was used in this document.
- Q. All right. Let's go to -- I want to turn back to -- as we're talking here about Mexico, and so we're -- I'm done talking about that allotment and the status check, but I do want to look at another feature of Mexico, and that's shown in New Mexico 2270. And we looked at this earlier. This is that final allocation letter from Mr. Cortez. You remember looking at this earlier?
 - A. Yes.

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- Q. We turn to Page 2 this time, and we're going to go to the sixth paragraph, so the next paragraph. There it says, "Mexico" -- here, Mr. Cortez was explaining that, "Mexico's allocation shall be based on Reclamation's D1 curve," right, and you testified to that, right?
 - A. Yes and yes.

Q. And -- and -- and it will be allocated in compliance with the provisions of the Rio Grande
Compact and the Convention of 1906. Do you see that in the last sentence?

- A. That's what it says.
- Q. If you look at the first sentence of that paragraph, it says, "Mexico's allocation shall be based on Reclamation's D1 curve and the total amount of Project water legally available for release from Project storage including any water associated with the balance of water in the District's allocation accounts that was carried over from one year to the next." Do you see that?
 - A. Yes, I see that.
- Q. And my understanding of that is that Mexico's allocation is not impacted by the amount in the carryover accounts; is that correct?
 - A. That is how the calculation works, yes.
- Q. So it's your understanding that Mexico should not be impacted by the Mexico carryover -- I mean, by the EBID or EP No. 1 carryover, right?
 - A. Correct.
- Q. All right. Let's go back to the spreadsheet because there's a feature of this that didn't seem consistent with that to me. So if we go back to

1711A, and, now, remember, we're -- we're looking at 1 2 the Mexico allocation is in Line 20. That's that 3 37,670, right? 4 Α. Yes. 5 And I want to point out a couple lines that 0. 6 we haven't looked at yet, and that's Lines 14 and 15. 7 This is EBID Allocation Balance End of Year and EPCWID 8 Allocation Balance End of Year. Do you see that? 9 Α. I see that. 10 That's basically the amount that's expected 0. 11 to be carried over at the end of 2018, right? 12 Could be. Α. 13 And, in fact, we know -- we can go and look 0. 14 at US-563, but this is a number, for example, for the 15 EPCWID Allocation Balance End of Year, it's a number

- that comes from EP No. 1, right?
- I don't see that I've actually entered a Α. value in for that.

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- No, you haven't. I don't know -- have you Q. ever entered a value into either one of those boxes?
- Α. I have been playing around with this spreadsheet. I don't recall specifically from over the last six years if I've done it in an actual spreadsheet.
 - 0. Well, let's play around with it actually.

Before we do that, I'll just say to the judge and parties, I mean, we can look at Exhibit 563, that Page 3, and we can see where that Line 15 comes from. We don't have to do it now. But let's assume that that Line 15, the EPCWID Allocation Balance, is a hundred thousand acre-feet. So I'm going to ask Ms. Ferguson to put in a hundred thousand and hit return. And we can see now, Line 20, Mexico changed from 37,000 and change to 27,000 and change, right? If Ms. Ferguson can go back and hit undo, you can see that number change again. Do you see that?

- A. Yes, I see that.
- Q. So the point being, that number in Lines 14 and 15 will actually change the Mexico allocations, right?
 - A. Yes.

2.4

- Q. Okay. Let's hit undo on that and go back to the original way the spreadsheet is, and, now, let's go to the allocations to the districts. Here, we're looking at Step 4 from that US-563, and -- and, now, we're talking about establishing allocations to EBID and EP No. 1. So first, if you look at -- we -- we saw that language earlier that says EP No. 1's allocation for the current year is based on D2, right?
 - A. I'm sorry. Can you say that again?

1	Q. I can. I was just pointing out, we looked at
2	language earlier from one of the documents indicating
3	that the EP No. 1 current year allocation is based on
4	the D2 curve?
5	A. Yes.
6	Q. Okay. And so if you look at Line 22, this is
7	the gross D2 diversion allocation, right?
8	A. Yes.
9	Q. The the now, the D2 curve used in this
10	spreadsheet is mostly the same as the historic D2
11	curve and D2 method, right?
12	A. Yes.
13	Q. And the one change that I understand is that
14	whereas the D2 curve historically had stopped at a
15	certain number, now the D2 curve has been extended to
16	790,000 acre-feet under the operating agreement; is
17	that right?
18	A. I don't see that in this equation.
19	Q. Okay. Is is it do you just not know
20	whether that's correct or not?
21	A. Well, that's not what I see in this equation
22	so
23	Q. Well, that's true. This equation actually
24	still refers to 760,842, right?
25	A. Yes.

1 All right. Which we can go and look at Q. 2 Exhibit New Mexico 697, the water supply allocation 3 procedures, and I think we'll find that, but we don't 4

All right. So if we look at -- we're looking at that Box C22, and that's the formula for the D2, right? And you can see this time for releases, it's using that Line C11, the total usable water available for current year allocation?

Α. Yes.

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need to do that today.

- But as we talked about earlier, when you do Q. the Mexico allocation and apply the D1 curve, you actually use the Line 17 for releases for the D1 curve, right?
 - Α. Yes.
- Q. And just a simple comparison in 2008, you can see that the current usable water in Line 17 is almost twice as much as the total usable water available for allocation shown in Line 11, right?
- It's not almost twice as much. Α.
- 21 0. Well, okay. It's more. Will you grant me 22 that?
 - Α. Yes.
 - Thank you. All right. And so because it's Q. more and we don't need to actually plug those numbers

into this spreadsheet, but because the release is more, that's going to also -- that would also result in a larger D2 diversion allocation? In other words, let me say that a different way. In other words, if you used for the release number the -- the current usable water, 525,563, instead of Line 11, the total water available for allocation, 289,812, that would result in a larger number for the gross D2 diversion allocation in Line C22?

- A. Yes. That's how the math works.
- Q. Right. It's all math. So continuing with the process, to get to the amount on which you base the U.S. allocations in Line 24, you subtract out the Mexico allocation in Line 20 from Line 22. So, in other words, to say that another way, to get to the net D2 current year diversion allocation for EBID and EPCWID in Line 24, you subtract the Mexico allocation of 37,670 from the gross D2 diversion allocation of 297,740, right?
- A. Yes.

- Q. That gives you 260,071 acre-feet for this year, 2018, right?
 - A. Yes.
- Q. Now, one of the purposes of the operating agreement and the diversion ratio was to ensure that

1	EP1 received its D2 allocation, right?
2	A. I wasn't part of developing, so I don't know
3	exactly why they entered into the agreement.
4	Q. Is that your understanding?
5	A. That is part of my understanding.
6	Q. That means after determining the net D2
7	current year diversion allocation for EBID and EPCWID
8	in Line 24, that amount is used to establish EP No.
9	1's current year allocation, right?
10	A. Yes.
11	Q. Okay. So so that number, the D2 current
12	year diversion allocation for EPCWID is shown in Line
13	25, that's 112,418, right?
14	A. Yes.
15	Q. And that's 43 percent of the net D2 current
16	year diversion allocation, right?
17	A. Yes, approximately.
18	Q. And it's it's approximately the same
19	amount that EP1 would have received using the
20	allocation process from 1980 to 2005, right?
21	A. I haven't compared it to that process.
22	Q. Is that your understanding?
23	A. Can you say it one more time?
24	Q. I can. My point is that D2 amount shown in
25	for EP No. 1 shown in Line 25 entitled, "D2 Current

Year Diversion Allocation for EPCWID," we talked about 1 2 the fact that is 43 percent of the net D2 current 3 year diversion allocation for EBID and EPCWID in Line 4 24. Are you with me so far? 5 Α. Yes. 6 And if you assume the same amount of releases Q. 7 between 1980 to 2005, that would give you that same 8 amount for EP No. 1 that's shown in Box C25? 9 Α. I don't think it would be the exact same 10 amount. 11 Why not? Q. 12 Α. Because the -- there was a different process 13 and no process for the allocation balance. 14 But you agreed with me it was the same curve 15 that was used from 1980 -- that was historically used, 16 right? 17 Α. It was generally my understanding. 18 And if you apply the same release amount, Q. 19 then you're going to get the same answer, right? 20 The equation gets the same answer. Α. 21 0. All right. Now, to get to EP No. 1's total 22 allocation, though, you have to add in the amount that 23 -- of the E P No. 1 carryover, right? 24 Α. The previous year allocation balance.

Okay. Which is shown in Line 13, right?

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0.

1 Α. Yes. 2 And oftentimes, that's referred to as 0. 3 carryover? 4 Α. Yes. I've heard people say that. 5 0. Yeah. In other words, it's the allocation 6 that they didn't use from the previous year, right? 7 Α. Yes. 8 And it's, therefore, carried over into the 0. 9 next year? 10 Α. Yes. 11 So that number, though, we see reflected in Q. 12 Line 26, and we can click on the box there. So we can 13 see it's Line 25, that's the line we just talked 14 about, plus C13, right, that's the total EPCWID 15 diversion allocation without conservation credit, 16 right? 17 Α. Yes. 18 And we still need to add in the conservation 0. 19 credit? 20 Α. Yes. 21 Which doesn't come until the end of the year? Q. 22 Correct. Α. 23 We'll talk about that in a moment. 0. We can 24 see in this spreadsheet, it's actually zero.

so, now, let's turn to EBID's allocation and that

process. So unlike EP No. 1, using this spreadsheet,

EBID is not allocated 57 percent of the gross D2

diversion allocation, right?

A. The question is confusing.

Q. Okay. Well, let's -- let's back it out then.

For the D2 curve, we use that Line 24 for EBID and

EPCWID, right? That's 260,000 acre-feet?

A. Yes.

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- Q. And if you simply apply the D2 curve, we can see what that number is, it's Line 31, right, for EBID would yield 147,653, right?
 - A. Yes.
- Q. Okay. But that's not the amount we can see that EBID is actually allocated in this spreadsheet, is it?
 - A. It is not.
- Q. Okay. So let's talk about that process. To get to the EBID allocation, you apply the diversion ratio, right?
 - A. Yes.
- Q. Now, the master asked about the diversion ratio earlier and I want to show you a description of that and I'm going to turn to New Mexico Exhibit 210. It's not an admitted exhibit yet, so I'm going to ask you some questions about it. I'll point out to the

1 Special Master first that this is also designated as 2 US Exhibit 657. You've seen this document before, 3 right, Ms. Estrada-Lopez? 4 Α. Yes, I have. 5 And you're generally familiar with it? 0. 6 Α. Generally, yes. 7 Q. It's the final environmental impact statement 8 for the continued implementation of the 2008 operating 9 agreement for the Rio Grande Project, New Mexico and 10 Texas? 11 Α. Yes. That's the title. 12 This is the most recent NEPA document that Q. 13 was available for this project, right? 14 I don't know if there's any other NEPA Α. 15 documents after this. 16 Q. This document was produced by Reclamation? 17 Α. Yes. 18 It's required by statute? Q. 19 Α. I don't know the statutes. 20 You understand, though, that it was required 0. 21 to be produced? 22 Α. Yes. 23 It's made publicly available, right? 0. 24 Α. Yes, it is. 25 In fact, it's accessible from the Reclamation 0.

1 Website? 2 Α. Yes. 3 And kept on file by Reclamation? 0. 4 Α. Yes. 5 By 2016, you were actually working for 0. 6 Reclamation, right? 7 Α. Yes. 8 And, in fact, you worked on some of the 9 modeling efforts that ultimately went into this 10 document? 11 Α. At the very beginning, yes. 12 MR. WECHSLER: Your Honor, I offer New 13 Mexico Exhibit 210. 14 JUDGE MELLOY: Any objection? 15 MR. DUBOIS: No objection, Your Honor. 16 JUDGE MELLOY: All right. Exhibit 210 17 is admitted. 18 (BY MR. WECHSLER) Let's turn, please, to Page Q. 19 And, again, Ms. Estrada-Lopez, I'm going to use 20 the Bates numbers at the bottom of the page. 21 there's a heading you can see it's entitled, "The OA, 22 operations Manual, and diversion Ratio." See that? 23 Α. Yes, I do. 24 Q. We're going to look at this second paragraph, 25 the one that says, "Second." Before we do that, let's

look at that first paragraph. You see that it says, "The OA largely reflects historical operation of the RGP with two key changes." And it says, "First, the OA provides carryover accounting for any unused portion of the annual diversion allocations to EBID and EPCWID." Do you see that?

- A. Yes, I see that.
- Q. And that was a change from the historical operation; you understand that?
 - A. Yes.

- Q. Okay. Now, let's look at that second paragraph. And this is where we talk about the diversion ratio. And it says, "Second, the OA adjusts the annual allocations to EBID and EPCWID to account for changes in RG performance, as characterized by the diversion ratio." You understand the diversion ratio to be a second change from historical operations, right?
 - A. Yes, I do.
- Q. Okay. So, now, let's look down, and we can look at the -- the third sentence. It begins with, "The diversion ratio provision of the OA was developed to adjust the annual RGP allocations to the districts so as to provide RGP deliveries to EPCWID consistent with historical operations." Do you see

1 that?

- A. Yes, I can see that.
- Q. And that -- you understood that to be one of the purposes of the operating agreement, right?
 - A. I understand that's what I did.
- Q. Yeah. So -- and then I -- in looking at the last two sentences here -- well, we can highlight the rest. It says, "Prior to substantial increases in groundwater pumping within EBID and corresponding decreases in RGP performance." Right? That's what it says?
 - A. Yes.
- Q. And then the next sentence says, "The annual RGP allocation to EBID is then adjusted to current-year RGP performance as represented by the diversion ratio." And that -- you understand that to be correct, right?
 - A. Yes.
- Q. Then it says, "When the diversion ratio is high, greater than one, EBID generally receives an increase in allocation compared to historical operations." Do you see that?
 - A. Yes.
- Q. And, "When the diversion ratio is low, less than one, EBID generally receives a decrease in RGP

1 allocation compared to historical operations," right? 2 Α. Yes. 3 You've never actually seen a diversion ratio 0. 4 of greater than one, have you? 5 Not in the ones like that. Α. 6 So let's turn back to New Mexico 1711A, and 0. 7 let's look at that diversion ratio. We can see Line 8 28, the diversion ratio, is .9, right? .904597? 9 Α. Yes. That number actually gets adjusted throughout 10 0. 11 the year depending on the diversion ratio, right? 12 Α. Yes. 13 And that has a corresponding impact on the 0. 14 allocations? 15 Yes, it does. Α. 16 Q. Okay. Now, to get to -- we're still talking 17 about how we get to EBID's allocation, and so that 18 diversion ratio, that 0.9, is applied to Line 17, 19 which is the current usable water, right? 20 If you click on the equation for that, then I Α. 21 can confirm that. 22 Sure. You want to click on -- you want to Q. 23 click on, I think, the EBID diversion ratio allocation 24 in Line 33? Is that what you're looking for?

No, that's not helping.

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Α.

1 Oh, yeah. So you're looking at -- let's see. 0. 2 If we back out and we say -- try Line 30. No, that's 3 not the one that we're looking for here. What you're 4 looking for, Ms. Estrada-Lopez, is one of these lines 5 that tells you to apply the diversion ratio, right? 6 Α. Yes. 7 Q. And -- and how it gets applied to Line 17. 8 So let's see. Try Line 31. No, that's just the EBID 9 current year allocation. Do you know off the top of 10 your head, Ms. Estrada-Lopez? 11 I think we should try Line 29. Α. 12 Q. Line 29. Oh, yeah. 13 Α. Yeah. 14 So there -- here, you're getting the 15 diversion ratio adjustment and so you're applying the 16 diversion ratio from Line 28 to Line 17, right? 17 Α. Yes. 18 Okay. And, now, when -- when we arrived at 19 the D2 diversion allocation that was in Line 22, we 20 were actually applying the diversion ratio to Line 11, 21 the total usable water available for current year 22 allocation, right?

A. Yes.

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Q. But, now, we're applying the diversion ratio to get to EBID's allocation, and we see there in that

1 diversion ratio adjustment that, well, now, we're 2 applying this to Line 17, which, again, is -- is more 3 than Line 11, right? I mean, simple math, again, 4 525,653 is more than 289,812, right, or -- yeah? 5 Α. Yes, that sounds correct. 6 And let me just explain why that's important. Q. 7 So applying the diversion ratio to the larger number 8 in Line 17 gives you that number that we see in Line 9 29 of 50,149, right? 10 Α. Which row are we -- I mean, I know which row 11 the 50,00 is. What other row are we referring to? 12 Q. Well, if you look at the box on C29 --13 Α. Yes. 14 -- you can see that what you're applying that 15 number to the larger number, the 525,653, which you 16 just agreed with me is larger than the Line 11 number of 289,812, right? 17 18 Α. Yes. I'm asking which row are you referring 19 to that I'm applying it to? 20 Well, in order to get the 50,149, you're 0. 21 looking at Line 29, right, and you're applying the 22 diversion ratio from Line 28 to Line 17, correct? 23 Α. Yes. 2.4 And that gives you 50,149? Q.

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Α.

Yes.

1 Okay. And the reason that that's important 0. 2 is that amount in Line 30, if you deduct 50,149 from 3 -- actually, if you see Line 17, current usable water, 4 plus Line 29, that gives you that 475,504, right? 5 Α. Yes. 6 And so if that number in -- shown in Line 29 0. 7 is smaller than the sum of release and diversion ratio 8 adjustment, that's going to be bigger, right, that 9 stands to reason? 10 Α. Yes. 11 All right. Now, to get to the EBID 0. 12 allocation, though, we're looking at Line 33, so let's 13 click on that. That's that 112,076, right? That's called the EBID diversion ratio allocation, right? 14 15 Α. Yes. 16 Q. Here what you're doing is you're taking that 17 number from Line 30, the 475,504, you're subtracting 18 out the EP No. 1 allocation in Line 27 of 314,520, 19 right? 20 Α. Yes. 21 0. And then you're subtracting out the Mexico 22 allocation of 37,670, right? 23 Α. Yes. 2.4 And then you subtract out the ACE credit, but Q. 25 we don't actually know it right now, right?

1 That sounds correct. Α. 2 Yeah. So in this year, 2018, before the ACE Q. 3 credit is known, that gives you that number that we're 4 seeing in 33, 112,076, right? 5 Α. Yes. 6 And that number after that whole process 0. 7 gives you the EBID diversion ratio allocation, right? 8 Α. Yes. 9 Okay. And then you add in, to get their Q. 10 total allocation, you're now going to add in EBID's 11 carryover, shown in Line 12 of 11,239, right? 12 Α. Yes. 13 Which gives you that 123,315 acre-feet? 0. 14 Α. Yes. 15 And so to get to EBID's allocation, it's 0. 16 sometimes -- have you -- it's sometimes referred to as 17 you use the diversion ratio to figure out the 18 departures from the D2 curve; would you agree with 19 that? 20 Α. Yes. 21 0. And all of those departures then come out of 22 EBID's allocation, right? 23 Except for as provided by the other Α. 2.4 adjustments. 25 0. Okay. Well, we'll take a look at one of

1 those adjustments later. Is there any in particular 2 you're thinking of? 3 Α. There's the drought correction factor and then also on Line 32, I explained during direct that 4 5 that's another adjustment based on the difference in 6 the EBID diversion ratio. 7 Right. Okay. So all of those departures Q. 8 come out of EBID's allocation except as the drought 9 allocation factor applies and except for Line 32, and 10 we'll talk about those in a moment so that's right? 11 Α. Yes. 12 Q. Okay.

- Q. Okay. The drought correction factor here is -- can you point me to the line there? Is it 21, multiyear extreme drought D2 correction factor?
 - A. Yes, that's it.
- Q. In this year, you can see the amounts of water that you had, but that multiyear extreme drought D2 correction factor was one, right?
 - A. Yes.

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- Q. Which means there wasn't any change to the spreadsheet as a result of that factor in this year, correct?
 - A. Correct.
- Q. And so that's -- that's what that means. If it 's one in any other year, as well, then there's no

1 change to the spreadsheet from the drought factor, 2 right? 3 Α. Correct. 4 0. We're going to talk about Line 32, which you 5 did mention on direct earlier, in just a moment. So 6 let's see. Now, the assumption in charging EBID with 7 all of those departures from the D2 curve, is that the 8 reason that the project cannot deliver the D2 amount 9 in any given year is because of actions that take 10 place in New Mexico, right? 11 I don't know that that's what's assumed. Α. 12 Do you know what's assumed? Q. 13 Α. I didn't work on the development of the 14 operating agreement. 15 0. You just don't know? 16 Α. No. 17 You've never thought about it? 0. 18 I think about a lot of things. Α. 19 Now, Reclamation, though, doesn't actually do Q. 20 any assessment in any given year as to whether it's actions within New Mexico that are causing all of 21 22 those departures from the D2 curve, right? 23 Α. No, we do not.

can also impact the diversion ratio, right?

In fact, there are some actions in Texas that

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Q.

1	MR. DUBOIS: Objection; lack of
2	foundation.
3	MR. WECHSLER: Well, if she doesn't
4	know, I'd love to hear that.
5	JUDGE MELLOY: Well, she's talked
6	extensively about the diversion ratio, so I'm going to
7	have her answer.
8	Q. (BY MR. WECHSLER) Ms. Estrada-Lopez, do you
9	remember the question?
10	A. I'm getting tired. Could you please say it
11	again.
12	Q. I'm getting tired, too. My question was:
13	There are some actions in Texas that can also impact
14	the diversion ratio?
15	A. The diversion ratio comes from charges to all
16	three entities, which includes charges in Texas, so
17	yes.
18	Q. And and, also, those actions that are
19	above, say, the Acequia Madre, those would also impact
20	potentially impact the diversion ratio, right?
21	A. They could.
22	Q. Yeah. As an example, groundwater pumping in
23	the Mesilla part of the Texas basin or in Mexico could
24	affect the diversion ratio, right?
25	A. It could.

1 But under this formula, as we just saw, Q. 2 regardless of where those actions take place, it still 3 comes out of EBID's allocation? 4 Α. The diversion ratio's methodology applies to 5 the EBID allocation. 6 All right. So, now, let's turn to that Line Q. 7 32. So yesterday, you said that you adjusted the D2 8 portion -- or the adjusted D2 portion for EBID is 9 split proportionately between the two districts. You 10 recall saying that? 11 Α. Yeah. 12 And you were referring there to that Line 32, Q. 13 right, the difference between EBID diversion ratio 14 allocation and D2 diversion allocation? 15 Α. Yes. 16 Q. Okay. We can see -- we can see here in -- in 17 Line 32 that that difference is actually zero, right? 18 In this calculation, yes. Α. 19 And -- and have you ever had a spreadsheet of Q. 20 final allocation or an initial allocation where Line 21 32 was not zero? 22 I really do not recall. Α. 23 Can't remember any, though, that were? 0. 2.4 Α. I do not recall details of that. 25 All right. And if we look at the box in C32, 0.

which we're looking at now, it shows that for this adjustment to apply, the estimated current release, that's that Line 17, has to be more than 600,000, right?

- A. Yes. Wait, no.
- Q. Less than 600,000?
- A. Correct.

- Q. Yeah. My -- my apologies. It does have a carat facing the other way. And the EBID diversion ratio allocation has to be more than the D2 allocation, right? In other words, I think we're looking at 33 has to be more than 31?
 - A. Yes.
- Q. And -- and so that means that the amount that EBID would normally get under D2 shown in Line 31 has to be less than the diversion ratio allocation in 33, right?
 - A. Yes.
- Q. All right. Let -- let's look at a graphic of that, and we're going to look at US Exhibit 564. This has been admitted. Page 17. And you can see it's indicating this diversion ratio allocation so in this slide, the red star is showing the data point from this hypothetical year, right?
- A. Yes.

1	Q. And it's below the D2 curve?
2	A. Yes.
3	Q. And in those circumstances, as we just
4	discussed, EBID is charged with all of the negative
5	departures from the D2 curve, right?
6	A. Yes. That's what we discussed.
7	Q. But if the data point from the current year
8	were above the D2 curve, which it's not here, but if
9	it were above there do you follow me?
10	A. Yes.
11	Q that would mean that the diversion ratio
12	is producing more water than is predicted by the D2
13	curve, right?
14	A. Yes.
15	Q. And in those circumstances, that's when you
16	split up the difference, right? In other words, EBID
17	would not get all of the benefit of that water above
18	the D2 curve; it only gets 57 percent, right?
19	A. Yes. I think that's how the math works.
20	Q. And 43 percent then goes to EP No. 1?
21	A. Yes.
22	Q. Which is really just another benefit for EP
23	No. 1?
24	MR. DUBOIS: Objection as to form.
25	JUDGE MELLOY: Sustained.

1 (BY MR. WECHSLER) Looking at -- going back to 0. 2 Exhibit US-200. We looked at this earlier. You said 3 you couldn't remember what happened in Line 32. Let's 4 go to Page 9. We're already on Page 9. And if you 5 look there at Line 32, the difference between EBID 6 diversion ratio allocation and diversion allocation, 7 that number is zero, right? Do you see that? 8 zero. 9 Α. Yes.

- Q. And this is from 2016, right?
- A. Yes.

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- Q. All right. Let's go to the next year, which will be Page 10, and we can look, again, at that Line 32, and this is for 2017, right?
 - A. Yes.
 - Q. And we, again, see Line 32, zero, right?
- 17 A. Yes.
 - Q. Then let's go to Line -- the next page, Page 11, and one more time, we can look at that Line 32 for 2018, and that also is zero, correct?
 - A. Yes.
 - Q. All right. Let's go back to Exhibit 1711A, and a couple of other things I want to point out about this allocation method. Now, normally if you assume the same release amount, in other words, the same

amount being released from Caballo, the amount 1 2 calculated by the D2 curve will be greater than the 3 amount calculated by the D1 curve, right? 4 Α. Yes. 5 And that's because the amount at the river 0. 6 head gate estimated by D2 is -- is typically greater 7 than the amount arriving at the lands estimated by D1, 8 right? 9 Α. Yes. 10 0. And that, in turn, is true because there are 11 typically losses between the river diversion to the 12 lands, things like evaporation and seepage, right? 13 Α. Yes. 14 But when we look at here and compare the two 0. 15 amounts for D1 and D2, that's not true here, right? I 16 mean, we can see the D1 delivery amount is 331, and 17 the gross D2 is 297,740, right? 18 Α. Yeah, but we're not using the same volume to 19 plug into those equations. 20 My point exactly. You're using a different 0. 21 release amount, right? 22 Α. Yes. 23 Okay. Let -- let 's talk a little bit more 0. 2.4 about the diversion ratio. Now, the diversion ratio, 25 as we talked about, is in some ways a measure of

1 efficiency, right? 2 It's a -- no, it's not a measure of Α. 3 efficiency. 4 0. Well, we talked earlier, and I said could you 5 think about it as a measure of project efficiency, and 6 you ultimately said, yeah, you could think of it that 7 way. 8 I think we changed the word measurement in Α. 9 that agreement. 10 To -- to what? To -- what would --0. 11 It's related. It's related. Α. 12 All right. Fair enough. That efficiency or Q. 13 that -- maybe I should just say the diversion ratio 14 itself can be impacted by a number of factors, right? 15 Α. Yes. 16 Q. For example, it could be impacted by crop 17 selection? 18 It could be. Α. 19 Q. Irrigation methods? 20 Yes, it could be. Α. 21 Q. Temperature? 22 Α. It could be. 23 Precipitation? Q. 2.4 Α. It could be. 25 Yeah. And we've already talked about actions 0.

1 in Mexico and Texas, right? 2 We have talked about those. Α. 3 And many of those things are not under the 0. 4 control of the State of New Mexico, right? 5 Α. I don't think they are. 6 Now, the diversion ratio is calculated as the Q. 7 total amount of project supply delivered and charged 8 each year divided by the year's release from Caballo, 9 right? 10 Α. Yes. 11 Now, under the D2 curve, are you familiar Q. 12 with that it was the amount of diversions as opposed 13 to charged diversions that were actually forming the 14 data set for D2? 15 As I explained earlier, I've not looked at 16 the underlying data for D2. 17 All right. But will you agree with me that 0. 18 the diversion ratio can be impacted by Project 19 accounting? Will you agree with that? 20 Α. Yes. 21 For example, current Project accounting 0. 22 involves a number of credits and calculations, right? 23 Α. Yes, it does. 2.4 0. But that kind of accounting did not exist 25 during the D2 period, right?

1 I don't believe I reviewed the type of Α. 2 accounting from the D2 period. 3 So let me ask you this: Do you recognize a ο. 4 distinction between total diversions and charged 5 diversions? 6 Α. Yes. 7 Q. And those numbers can be different, right? 8 Α. Yes. 9 The charged diversions are those diversions Q. 10 that are actually charged through Project accounting? 11 Yes, they are. Α. 12 If water is diverted but that water is not Q. 13 charged in Project accounting, then the diversion 14 ratio will be lower as a result? 15 Can you explain your question again? 16 sorry. 17 Sure, I can. So we talked about the 0. 18 difference between total diversions and charged 19 diversions, right? 20 Α. Yes. 21 Now, I'll ask you to make an assumption, 0. 22 since you weren't sure about this, but assume that the 23 D2 curve is based on total diversions and not charged 24 diversions, right? And if water is diverted, but that 25 water is not charged by the Project accounting, then

1	that would result in a lower diversion ratio, right?
2	A. I don't know what we're comparing to. I'm
3	sorry.
4	Q. No, that's okay. I'm sure it's a
5	poorly-phrased question. What about this: The
6	diversion ratio is sensitive to small changes or
7	EBID's allocation, I should say, is sensitive to small
8	changes in the diversion ratio?
9	MR. DUBOIS: Objection; lack of
10	foundation.
11	JUDGE MELLOY: Well, she does the math
12	so I think this is a basically a math question, so
13	I'm going to overrule.
14	Q. (BY MR. WECHSLER) Do you want me to repeat
15	that, Ms. Estrada-Lopez?
16	A. No, thank you. If the diversion ratio
17	changes, EBID's allocation changes.
18	Q. And it's sensitive to small changes, right?
19	MR. DUBOIS: Objection to the form of
20	the question.
21	JUDGE MELLOY: Well, I think it I'm
22	going to sustain that.
23	Q. (BY MR. WECHSLER) All right. Let's go take a
24	look at Exhibit 1711A, and we can perform this
25	calculation, if that's your preference. Are you

1 looking at Line 28, Ms. Estrada-Lopez? 2 Α. Okay. 3 0. That's the diversion ratio, right? 4 Α. Yes. 5 Let's look at EBID's -- let's just go to 0. 6 their -- the total EBID diversion allocation in Line 7 35, and we can see there, that number is, what, 123,315, right, acre-feet? 8 9 Α. Yes. 10 Let's change the diversion ratio to .8, and, 11 now, we can see there that that same number in -- in 12 Row 35 has changed to 86,164 acre-feet, right? 13 Α. Yes. 14 And that's by -- that's only by changing the 0. 15 diversion ratio and nothing else? 16 Α. Yes. 17 0. All right. Let -- let's -- so that's a drop 18 of 37,000 acre-feet or something like that? 19 Α. Okay. 20 Yeah. You don't need to confirm that. 0. 21 let's hit undo just to go back to -- to where we were. 22 And let's talk a little bit about carryover. Now, for 23 nearly 100 years of Project operations, the unreleased 24 storage water or unused diversion allocation from 25 either district went back into the Project supply to

1 be allocated the next year, right? 2 That's correct. Α. 3 Which is to say, there were no separate 4 carryover accounts for the districts, right? 5 Α. Correct. 6 For the first time in 2006, a district had 0. 7 the ability to carry over part of its full annual 8 allocation? 9 Α. Yes. 10 And under the operating agreement, the 0. 11 districts have the ability to carry over up to 60 12 percent of the full annual allocation, right? 13 Α. Yes. 14 And since that operating agreement was 0. 15 adopted, Reclamation maintains separate carryover 16 accounts for EBID and EP No. 1? 17 Α. Yes. 18 You consider carryover to be an accounting Q. 19 balance, right? 20 Α. Yes. 21 It's not necessarily an amount in storage? Q. 22 Will you rephrase that? It's confusing. Α. In other words, it's not -- it doesn't 23 Yeah. 0. 24 represent an actual amount of water that is present in 25 storage; it's a accounting balance?

1 It's an accounting balance. Α. 2 0. Yeah. Evaporation to the carryover amounts 3 is not calculated? Do you want me to rephrase that? 4 You look confused. 5 Α. I didn't hear a question. 6 You didn't? Can you hear me now? Q. 7 Α. I heard a sentence. I didn't hear a 8 question. 9 Well, I certainly was intending that as a Q. 10 question, so am I correct that evaporation to the 11 carryover amounts is not calculated? 12 It's not. Α. 13 That's not correct? Carryover is not 0. 14 calculated; is that what you're saying? 15 It's not calculated. 16 Q. Thank you. Apologize for the 17 miscommunication. 18 And, therefore, there's no adjustment to the 19 carryover allocation balance for evaporation? 20 There is not. Α. 21 Let's look again at the spreadsheet to see 0. 22 the impact of carryover. Again, if we're looking at 23 Line 35 there, we see the total EBID diversion of 24 123,315, and we talked about the carryover amounts

being in Lines 12 and 13, so let's see what happens to

the EBID amount if we zero those out. So let's put a zero in 12 and a zero in 13 and, now, let's go down to Line 35 and see how much that is. So, now, we're at 189,036 acre-feet, right?

- A. That's what it says.
- Q. Which is more than 123,315?
- A. Yes.

- Q. And representing an increase by removing carryover of approximately 60,000 acre-feet, right?
 - A. Yes.
- Q. All right. Let's hit undo to go back to the normal spreadsheet then. And then there's many years between 1985 and the present that EP No. 1 did not order all of the project water allocated to the district, right?
 - A. I haven't reviewed it.
- Q. Well, let's take a look at Demonstrative Exhibit 4, New Mexico Demonstrative Exhibit 4. Here, we're looking at annual EP allocation and diversion charges from 1985 to 2005, and the -- the red line here represents the diversion charge, and are you saying, Ms. Estrada-Lopez, that you have not reviewed the diversion charges reflected in that red line as compared to the actual allocations to EP No. 1?
 - A. I have not.

1 All right. Are you aware that in many years, 0. 2 EP No. 1 did not order the full amount available to 3 it? 4 MR. DUBOIS: Objection; assumes facts 5 not in evidence. 6 MR. WECHSLER: I'm just asking if she's 7 aware. 8 JUDGE MELLOY: She can -- go ahead. 9 Overruled. 10 I've been told that. Α. 11 (BY MR. WECHSLER) All right. Let's turn to Q. 12 credits that you talked about before. So let's look 13 at Exhibit -- New Mexico Exhibit 2464. I think this 14 will be the operating agreement that you looked at 15 yesterday, and you can see on the right there is Page 16 12 of that document. You can see this is -- the title 17 is, "Example of EPCWID's monthly water allocation 18 charges report," right? 19 Α. Yes. That's the title. 20 So in addition to everything we discussed 0. 21 before, EP also gets some credits to its charges, 22 right? 23 Α. Yes. 24 0. So let's talk about a couple of those. You 25 can see the Haskell Street Wastewater Treatment Plant

1 effluent shown down there below Riverside Canal. Do 2 you see that? 3 Α. Yes, I see that. 4 0. Then let's talk about the -- you can see the 5 estimated annual conservation credit diversion 6 allocation; do you see that? 7 Α. Yes. 8 And I also want to talk about Riverside Q. 9 Canal, which is shown there on that figure, right? 10 Α. Okay. 11 Okay. So talking first about municipal Q. 12 effluent, now, during the period 1940 until 2002, 13 municipal effluent was discharged into either the 14 river or project facilities, right? 15 MR. DUBOIS: Objection; assumes facts 16 not in evidence. 17 MR. WECHSLER: I'm asking her if that's 18 true. 19 JUDGE MELLOY: Overruled. 20 That's my understanding. Α. 21 (BY MR. WECHSLER) And during the period 1940 0. 22 until 2002, that municipal effluent contained some 23 water that originated from Project supply? 24 Α. Can you say the years again? 25 Yeah. 1940 to 2002. I'm tracking another 0.

1 Request for Admission, which I'll just for the record say is in New Mexico Exhibit 1061, Pages 5 through 8, 2 3 RFAs No. 87, 89, and 91. Do you want me to repeat 4 that, Ms. Estrada-Lopez? 5 Α. I believe there was some project water used 6 by the City of El Paso during that time period. 7 Okay. And -- and during that time period, 8 municipal effluent discharged into the river or the 9 project facilities would have contributed to water 10 diverted by EP1 farmers? 11 MR. DUBOIS: Objection; lack of 12 foundation. 13 JUDGE MELLOY: I'll overrule that. 14 If the water came into the system and then 15 was put into the facilities that sent water to EP1 16 farmers, then yes. 17 Therefore, if that water 0. (BY MR. WECHSLER) 18 was diverted by EP1 farmers, diverted by EP No. 1, 19 during the period of 1951 to 1978, then it would form 20 part of the D2 data set, right? 21 Α. It would be part of the D2 data set. 22 So today, EP1 farmers in the El Paso Valley Q. 23 divert water that contains municipal effluent, right? 24 Α. That's my understanding.

And are you aware that the City of Las Cruces

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1 also has effluent discharged into the Rio Grande? 2 Α. I am. 3 And we actually saw that with the Special 0. 4 Master on the basin tour, right? 5 Α. Yes, we did. 6 Can you tell me how Reclamation accounts for Q. 7 that Las Cruces effluent? 8 I don't believe that it is part of the Α. 9 accounting process. 10 In other words, it's water that enters from 0. 11 the Las Cruces wastewater treatment plant, simply 12 forms part of Project supply? 13 Α. Yes. And then it's accounted for when it's 14 diverted. 15 0. And if it were diverted and accounted for, 16 then EBID would be charged for that? 17 Whoever diverted it. Α. 18 Let's talk about the Haskell Street 0. 19 Wastewater Treatment Plant, and let's go back to that 20 -- actually, let's look at a photograph from the basin 21 tour in New Mexico Demonstrative Exhibit 2, and this 22 is Page 51 of that document. You recognize this as a 23 photograph, I'll represent that I took it, of the --24 the wastewater treatment plant effluent outfall from

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Haskell Street?

That looks like it. 1 Α. 2 Prior to 1998, the Haskell Wastewater 3 treatment plant discharged treated effluent into the 4 Rio Grande, right? 5 MR. DUBOIS: Objection; lack of 6 foundation. 7 Q. (BY MR. WECHSLER) Do you know? JUDGE MELLOY: If she knows. 8 9 I don't know where that discharged. Α. 10 Okay. I'll then refer the 0. (BY MR. WECHSLER) 11 Court to Exhibit New Mexico 1061, Page 10 and 11, RFA 12 No. 97, and, also, Page 14, No. 102. Now, turning to 13 the period of 2003 until the present, municipal 14 effluent from Haskell and Bustamante wastewater 15 treatment facilities contain water that originated 16 from the Project, right, from Project supply? 17 MR. DUBOIS: Objection; lack of 18 foundation. 19 MR. WECHSLER: She's --20 JUDGE MELLOY: Overruled. 21 Α. I know part of the City of El Paso's water 22 comes from the Project. 23 (BY MR. WECHSLER) Today, the diversion and 0. 24 use of municipal effluent discharged by the Haskell 25 Wastewater Treatment Plant is not charged as Project

supply, right?

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- A. No, it's not.
- Q. That's because the Haskell effluent is metered and deducted from EP No. 1's allocation charges?
 - A. Yes.
- Q. Turning then to the Bustamonte All right. wastewater treatment plant, and this time, I want to use Google Earth, which was New Mexico Demonstrative Exhibit 1. So if we go back to the -- we can -- we can un-click the wells so click the little box. Yep. And then double-click on Riverside Canal and give it a second to work. All right. We talked earlier this is the Riverside Canal. I'll ask Ms. Ferguson then to zoom in up there on the Riverside Canal delivery gage. And keep going. We're going to go in nice and tight. Keep going. I want to actually see the picture. There you go. That's probably good enough. Ms. Estrada-Lopez, you recognize this as the general location of the Riverside Canal gage?
 - A. Yes.
- Q. We saw that, again, on the basin tour with the Special Master, right?
- A. Yes, we did.
- 25 Q. And this is the location where EP No. 1 is

1 charged for water in the Riverside Canal, right? 2 Yes, it is. Α. 3 Okay. Then, now, I'm going to ask Ms. 0. 4 Ferguson to -- under EPWU Infrastructure. El Paso 5 Valley, yeah, there you see EPWU Infrastructure. 6 Yeah. And, now, click Bustamonte discharge, click the 7 box first. Now, double-click on the button. 8 should take us there. Okay. Now, we can see, this is 9 where the Bustamonte Wastewater Treatment Plant 10 discharge -- is discharged into the Riverside Canal, 11 right? 12 Α. Okay. 13 0. Is that correct? 14 I think so. Α. 15 0. That's also where we -- we also visited that 16 with the Special Master? 17 Α. Yes. 18 And this discharge occurs below the Riverside 0. 19 Canal gage, right? 20 Α. Yes. 21 Because it's downstream or below the 0. 22 Riverside Gage, it's -- EP1 is not charged for that 23 water, correct? 2.4 Α. If it's not in the accounting sheet, then 25 they're not charged for it.

1	Q. Yeah. So Reclamation doesn't track the
2	amount of effluent discharged from the Bustamonte
3	Wastewater Treatment Plant?
4	A. No, we do not.
5	Q. And Reclamation does not account for or
6	otherwise charge EP No. 1 for that water?
7	A. No, we do not.
8	Q. But water users in EP No. 1 use that effluent
9	downstream, right?
10	A. I assume so.
11	Q. All right. Let's turn to the American Canal
12	Extension. That's a lined canal in EP No. 1 that was
13	constructed in the late 1990s, right?
14	A. Yes.
15	Q. Canal
16	MR. DUBOIS: Your Honor, I'm sorry.
17	We've been going for about an hour and a half, and
18	since Mr. Wechsler is shifting to a new line of
19	inquiry, maybe it'd be an appropriate time to take a
20	break?
21	JUDGE MELLOY: How much longer do you
22	think you're going to be, Mr. Wechsler?
23	MR. WECHSLER: I'm always reluctant to
24	make estimates, because lawyers are notoriously bad,

but I would say 45 minutes.

1 JUDGE MELLOY: All right. Let's take a 2 15-minute -- we'll take a 20-minute recess at this 3 point. 4 MR. DUBOIS: Thank you, Your Honor. 5 (Recess.) 6 JUDGE MELLOY: All right. Looks like we 7 have everybody. Mr. Wechsler, you may proceed. 8 Thank you, Your Honor. MR. WECHSLER: 9 (BY MR. WECHSLER) Ms. Estrada-Lopez, before 0. 10 the break, we turned to the American Canal Extension, and I'll sometimes refer to that as the ACE. Do you 11 12 understand what I'm referring to? 13 Α. Yes, I do. 14 0. So the ACE is located entirely in Texas, 15 correct? 16 Α. Yes. 17 0. A credit is given on an annual basis for 18 water conserved by the ACE? 19 Α. Yes. 20 The credit is based on the volume of water 0. 21 that is saved by using that American Canal Extension? 22 Α. Yes. 23 And the credit is applied at the end of the 0. 24 year? 25 Typically. Α.

And the -- the same credit that's given to EP 1 0. 2 No. 1 is deducted from EBID's allocation? 3 Α. Yes. 4 0. But you don't know why the ACE credit is 5 deducted from EBID's allocation? 6 Α. I don't know why. 7 Q. Now, you indicated yesterday that there are 8 some years in which the ACE credit -- credit is split 9 between EBID and EP No. 1. Do you recall that? 10 Α. Yes. 11 And you had said that occurs when there's a 0. 12 transfer of carryover water from EP No. 1 to EBID, 13 right? 14 Α. Yes. 15 0. And that only happens when EP No. 1 has a 16 full supply and has an additional 60 percent of a full 17 supply in carryover; isn't that right? 18 Α. I don't think that's always the case. 19 Well, when transfer occurs, they have to be Q. 20 -- well, when transfer occurs, they have to be 21 carrying over 60 percent of a full supply; will you 22 agree with that part? 23 Α. Yes. 2.4 0. So since you've been working on the 25 allocations, has such a transfer occurred?

1	A. Yes.
2	Q. In what year?
3	A. I would have to look at the spreadsheets.
4	Q. And since 2008, are you aware of the total
5	number of years that transfer has happened?
6	A. Not off the top of my head. I would have to
7	look at the spreadsheets.
8	Q. Less than five?
9	A. I really can't give you a guess.
10	Q. Okay. We can well, actually, let's look
11	at New Mexico Demonstrative Exhibit 4. Let's see if I
12	have the right number. Yep. Then let's scroll down
13	to the last page, which should be Page 5. Here, you
14	see transfer from EPCWID and transfer to EBID as a
15	couple of the columns. Do you see that?
16	A. I do see that.
17	Q. And at least assuming this is accurate, that
18	occurred in 2009 and 2010, right?
19	A. If this is accurate, that's what it says.
20	Q. Do you have any information to suggest
21	otherwise?
22	A. Not for these years.
23	Q. Now, as we heard on the basin tour, EBID
24	actually moves some of its water through its system in
25	pipes. Were you aware of that?

1	A. Yes.
2	Q. Moving water through pipes would prevent
3	water losses through seepage or evaporation?
4	A. Yes.
5	Q. But despite that, EBID does not get a credit
6	for this water that's not lost to the system, right?
7	A. There's not a credit on their accounting
8	sheets for that.
9	Q. All right. Let's turn to Canutillo, and we
10	can take down this demonstrative for now. You
11	mentioned yesterday that a charge is given for pumping
12	in Texas at the Canutillo well field, right?
13	A. Yes.
14	Q. And pumping started well, the Canutillo
15	well field is a a well field in the northern part
16	of EP1, right?
17	A. Yes.
18	Q. And we actually looked at one of the wells on
19	the basin tour?
20	A. Yes.
21	Q. Pumping has occurred in the Canutillo well
22	field since some time in the 1950s. Are you aware of
23	that?
24	A. I have not looked at the data.
25	Q. Pumping in Canutillo well field has been

occurring at least since you've been involved with the 1 2 Rio Grande Project? 3 Α. Yes. Are you aware that estimates have been done 4 0. 5 to show that 90 percent of Canutillo pumping comes 6 directly from the Rio Grande? 7 I don't recall that number. 8 Are you aware that a significant amount of 0. 9 that pumping from the Canutillo well field comes from 10 the Rio Grande? 11 Α. Yes. 12 Are you able to estimate the percentage of Q. 13 that pumping that does come from the Rio Grande? 14 No, I'm not a groundwater modeler. Α. 15 0. Is that something that Reclamation is 16 generally aware of? 17 I'm confused as to what you're asking. Α. 18 I'm asking if -- if you know, as part of your 0. 19 professional duties at the Bureau of Reclamation, 20 whether Reclamation has a calculation for how much water comes out of the Rio Grande due to the Canutillo 21 22 well pumping? 23 I'm aware that there is a calculation in the Α. 2.4 2001 contract related to that, and I'm aware that

there is a calculation for a charge that could be

1 applied in the Rio Grande Project accounting. 2 You just don't know what that calculation is? 0. 3 Α. I've seen it. Let's take a look at New Mexico Demonstrative 4 0. 5 Exhibit 17. 6 Which, Your Honor, we MR. WECHSLER: 7 just disclosed this last night after hearing 8 Ms. Estrada-Lopez's testimony yesterday. I'm just 9 pausing to see if there's any objections to it. 10 MR. DUBOIS: It's offered as a 11 demonstrative, so there's not a -- I mean, I have no 12 idea what the source of the data is, but Mr. Wechsler, 13 I'm sure, will tell us. 14 MR. WECHSLER: Well, I'll -- it is 15 purely demonstrative, Your Honor. I will have a 16 witness later on explain the source of the data. 17 think at the bottom there, it says pumping values 18 reported in EPCWID accounting spreadsheets. 19 JUDGE MELLOY: All right. Go ahead. 20 Thank you, Your Honor. MR. WECHSLER: 21 0. (BY MR. WECHSLER) So, Ms. Estrada-Lopez, 22 looking at New Mexico Demonstrative Exhibit No. 17, do 23 you, as part of your duties, track the amount of 2.4 annual pumping from the Canutillo well field? 25 I do. Α.

1	Q. Looking at the second column there with the
2	heading "Canutillo Annual Pumping," and you can see
3	there it references the EPWU reporting in EPWCID
4	accounting spreadsheets. Do those numbers look
5	roughly correct? In other words, are they in general
6	proportion to the 20,000 acre-feet range?
7	A. That appears correct.
8	Q. Now, the charge that you referenced yesterday
9	to EP No. 1 for Canutillo pumping, that is prorated
LO	for the release season, right?
L1	A. Yes.
L2	Q. What do you consider the release season for
L3	the Project?
L4	A. When we are releasing.
L5	Q. And, generally, when is that?
L6	A. It's it's different every year.
L7	Q. Can you give me an estimate?
L8	A. With lots of water, it's from March through
L9	October.
20	Q. How about if in a water short year? How
21	about this
22	A. It's been I'm sorry.
23	Q. I didn't mean to interrupt you. I was going
24	to ask maybe exactly what you were going to offer, and

that is: What is the shortest release season that

you've seen?

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A. I think it was about six weeks or around two months.

- Q. And so it's only during that period that the charge to EP No. 1 for the Canutillo pumping is applied?
- A. I'd have to go back and look at the calculation exactly. I don't recall.
- Q. Let me ask you this: In the second column there, there's a column that says, "Was any adjustment made?" And you can see in a number of years, at least in this column, it reflects that no adjustment was made or charge given for the Canutillo pumping. Are you aware that there were some years in the past where there was no charge for Canutillo pumping?
 - A. I am aware of that.
- Q. Let me ask you about 2014. You see there's some question marks there in this New Mexico

 Demonstrative Exhibit 17. Do you know if there was an adjustment made in 2014 for -- or a charge given to EP No. 1 for Canutillo annual pumping?
 - A. I don't know that off the top of my head.
- Q. Looking at the third column there, the one that's titled, "Amount of Canutillo Accounting Charge in Acre Feet," do those numbers look roughly

1 consistent with your memory? 2 Α. Yes. 3 So assuming all of this is correct, the 0. 4 highest that the charge has ever been is 10,000 5 acre-feet or so, right? 6 Α. According to this, yes. 7 Q. Which is below 50 percent of the annual 8 pumping from Canutillo, right? 9 Α. Yes. 10 0. Many years, there was no charge given, right? 11 Correct. Α. 12 And then in a number of other years, it's Q. 13 only a fraction of the total Canutillo annual pumping? 14 Α. Correct. 15 0. We talked earlier about full supply in the 16 period 1951 to 1979, and also during the period 1980 17 to 2005. Let's talk a little bit about full supply 18 under the operating agreement. Under the 2008 19 operating agreement, as we saw before, the -- the full 20 supply release has changed to 790,000 acre-feet; is 21 that right? 22 Can you say that again? Α. 23 I can. We're talking about the 2008 0.

operating agreement, and my question is: Under that

agreement, a full supply release is considered to be

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1 790,000 acre-feet? 2 That's not what I would say. Α. 3 0. What would you say? 4 Α. That 790,000 is used as a maximum for the 5 volume of water that would go into the current-year 6 allocation process. 7 Q. All right. We talked about that earlier? 8 Α. Yes. 9 How about this, under the operating 0. 10 agreement, the full annual diversion allocation to the 11 U.S. canal headings is considered to be 898,056 12 acre-feet? 13 Α. I don't recall seeing that number in that. 14 Do you recall that the full allocation under 0. 15 the operating agreement to EBID is 509,864 acre-feet? 16 Α. If that's what it says in the operating 17 agreement. 18 And how about for EP No. 1, do you recall 0. 19 that a full supply under the operating agreement for 20 EP No. 1 is considered to be 388,192 acre-feet? 21 If that's what it says in the operating 22 agreement. 23 Let's look at the final allocations over the 0. 2.4 years under the operating agreement. I want to call 25 up again Demonstrative Exhibit No. 3, Page 5.

1	being told maybe it's 4 that we need to look at, so
2	let's look at New Mexico Demonstrative Exhibit 4.
3	That's it. Yeah. That's Page 5 of New Mexico
4	Demonstrative Exhibit 4. And here, we're looking at
5	what's titled, "Annual Allocation and Diversion
6	Charges 2006 to 2018." 2006 is the year that the D3
7	plus carryover methodology was adopted, right?
8	A. I don't know what you mean.
9	Q. You're not familiar with the term D3 plus
10	carryover?
11	A. I've never used that term.
12	Q. The methodology that's well, are you
13	familiar with the term generally?
14	A. I've heard New Mexico people use it.
15	Q. And what do you understand it refers to?
16	A. I think that they are using it for what
17	they're calling the operating agreement.
18	Q. You understand that the operating agreement
19	was adopted in 2008, right?
20	A. Yes.
21	Q. But in 2006, Reclamation used a method that
22	allowed for carryover; is that right?
23	A. Yes.
24	Q. And and also applied the diversion ratio

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beginning in 2006?

1 Yes, I believe so. Α. 2 Q. Have you ever seen a memo from Dr. King 3 entitled the D3 methodology? 4 Α. Not that I recall. 5 Let's look back at Demonstrative Exhibit 4, 0. 6 Page 5 here. So we see the period 2016 to 2018, and 7 if you look at EBID, you can see those total charges 8 in what looks like the fifth total allocation that's 9 entitled in the fifth column. You see that? 10 Α. Yes. 11 And then if you compare those to the EP No. 1 0. 12 total allocation, which is second from the right, you 13 see that column? 14 Α. I can see it. 15 And if you look at those total allocations, 16 when I see them, in all but two years, the total 17 allocation to EP No. 1 was greater than that to EBID. 18 Do you see that? 19 Α. That appears correct. 20 Do you have any reason to think that that's 0. 21

- not correct?
 - Α. No.

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All right. We can put that down, and let's 0. talk a little bit about the mechanics for orders. once those allocations are set, they represent the

1 maximum amount of water that's available for a 2 district to order, right? 3 I think they could order more. Α. 4 0. More than what's allocated to them? In other 5 words, you have a total allocation charge for that year, right? Is that right? 6 7 Α. There is a total allocation charge for a 8 year. 9 And that represents the maximum amount that a Q. 10 district can order for that year? 11 Α. I just don't think that that would add up to 12 similar -- the exact same numbers. 13 0. How about if I just say the -- I think I used 14 the word charge, it looks like from realtime, so the 15 total allocation represents the maximum amount that 16 can be ordered. Can you agree with that? 17 Α. No. 18 Why not? 0. 19 Α. Because the order sheets include lots of 20 things, including bypass and river boost. 21 Q. So they can order more than they're actually 22 allocated? 23 That would be how the math works. Α. 2.4 Q. They can only be charged for -- or the 25 maximum amount they can be charged for is represented

1 by the total allocation; is that right? 2 Α. No. 3 We talked earlier about allocations. 0. 4 recall that? 5 Α. Yes. 6 And I think you generally said the allocation Q. 7 represents the total amount of water that each 8 district is entitled to order for the year. Do you 9 recall that? 10 Yes, I do. Α. 11 And that's a correct statement? 0. 12 Α. I would say it's a general statement. Ιt 13 doesn't include caveats. 14 0. Yes. As we've looked at the spreadsheet, 15 it's quite complicated, right? 16 Α. Yes. 17 All right. So -- so we looked at the 0. 18 operating manual earlier. Let's look back at it for 19 the mechanics for ordering those allocations. And I 20 want to look at -- so it's New Mexico Exhibit 2464, 21 and I want to look at Page 5, Section 4.1. 22 under a heading, "Water Delivery and Accounting, 23 Ordering of Water by the Districts," right? 2.4 Α. Okay. 25

Is that right?

ο.

1 That's what's on the screen. Α. 2 Yeah. And that -- it's this operating manual 0. 3 that sets the way in which water is ordered by the 4 districts, right? 5 Α. Yes. 6 If you look at Figure 1, Page 7, in here we Q. 7 see Figure 1, Internet-based order forms. Do you see 8 that? 9 Α. Yes. 10 And you looked at something similar to this 0. 11 yesterday during your direct testimony. You recall 12 that? 13 Α. Yes. 14 And we see that any time -- well, the -- the 15 -- let me just ask you this: When there's a change in 16 the release from Caballo, does Reclamation perform a 17 flow measurement below the dam? 18 Α. If it's greater than a hundred CFS change, we 19 do. 20 So staying on this Page 7, the goal is to 0. 21 release enough water to meet the orders; is that 22 correct? 23 Α. Yes. 2.4 And in determining how much to release, Q. 25 Reclamation considers return flows, other flows in the

1 river, deliver efficiency -- delivery efficiency, and 2 other factors, right? 3 Α. Yes. 4 0. And as you look at this Figure 1 on New 5 Mexico 2464 on Page 7, we can see that the amount of 6 water arriving at each location is tracked as it flows 7 down through the system, right? 8 Α. Yes. 9 Which allows the districts and Reclamation to 0. 10 know where the water is so that they can be sure it 11 arrives where it's supposed to arrive, right? 12 Α. Yes. 13 You can see in that right-hand column, a box 0. 14 for river boost, and you talked about that with 15 Mr. Dubois. You recall that? 16 Α. Yes. 17 And we can see here at -- at -- towards the 0. 18 bottom of that, you can see a line that says, "Total 19 Gains/Loss." Do you see that? 20 Can you highlight it for me? Α. 21 It's three from the bottom in the 0. 22 right-hand column. Right there (indicating). 23 Α. Yes, I see that. 2.4 0. And that -- that column is a measure of how

much water is being gained or lost as the water

1 travels to the American Dam, right? 2 It's an estimate. Α. 3 When Reclamation determines its releases, it 0. 4 takes into account the gains and losses that are 5 occurring in the system? 6 Α. Yes. 7 Q. That way Reclamation is able to adjust to 8 ensure that water arrives at the district when it's 9 ordered? 10 Α. Yes. 11 And Reclamation releases the amount of water 0. 12 that it deems sufficient to meet EP No. 1 orders? 13 Α. What we estimate is needed, new release. 14 0. All right. Two more subjects, 15 Ms. Estrada-Lopez. The first is a couple quick 16 questions about maintenance, and then you talked about 17 credit water and how that's accounted for yesterday, 18 and I have a few questions about that. So, first, in 19 terms of river maintenance, sediment in the bed of a 20 river can effect evaporative losses from that river; 21 is that right? 22 MR. DUBOIS: Objection; lack of 23 foundation. 2.4 I'm happy to lay a MR. WECHSLER:

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foundation, Your Honor.

1	JUDGE MELLOY: All right. Go ahead.
2	Q. (BY MR. WECHSLER) Are you aware,
3	Ms. Estrada-Lopez, of the effect of sedimentation?
4	A. On what?
5	Q. On evaporative losses.
6	A. I've not had occasion to look at that.
7	Q. You are responsible for releases from the
8	Project, are you not?
9	A. Yes, I am.
10	Q. And also for allocations?
11	A. Yes, I am.
12	Q. You haven't had occasion to look at
13	evaporative losses related to sediment in the river?
14	A. No, I have not.
15	MR WECHSLER: On that question, Your
16	Honor, about evaporative losses, I'll refer to New
17	Mexico Exhibit 1055 at Page 25, RFA No. 74.
18	Q. (BY MR. WECHSLER) Do you know or have you had
19	an occasion, Ms. Estrada-Lopez, to look at the growth
20	of the effect of sedimentation on the growth of water
21	consuming vegetation along the channel of the river?
22	A. I'm not I don't recall looking at
23	vegetation growth based on sediment.
24	Q. All right.
25	MR. WECHSLER: On this, Your Honor, I'll

1 refer to New Mexico Exhibit 1055 at 26, RFA No. 75. 2 (BY MR. WECHSLER) Ms. Estrada-Lopez, below 3 Caballo, the IBWC has responsibility for river maintenance; is that right? Or yesterday, you may 4 5 have said below Percha. 6 MR. DUBOIS: Objection; lack of 7 foundation; calls for a legal conclusion. 8 MR. WECHSLER: Again, I'm happy to lay 9 foundation. 10 JUDGE MELLOY: Go ahead, but I do think 11 she testified about this yesterday, but go ahead. 12 MR. WECHSLER: Yeah, she did. 13 (BY MR. WECHSLER) That's my question, 0. 14 Ms. Estrada-Lopez. Can -- can you tell us --15 yesterday, you talked about river maintenance, right, 16 and the responsibilities below Caballo; do you recall 17 that? 18 Α. I recall there was a question on 19 responsibilities below Elephant Butte. 20 And what was your answer? 0. 21 That Reclamation does channel maintenance Α. 22 between Elephant Butte and Caballo and between Caballo 23 and Percha. 2.4 And who's responsible for that maintenance Q. 25 below Percha?

1 MR. DUBOIS: Objection; Your Honor, 2 calls for lack of foundation and calls for a -- a 3 legal conclusion as it's been phrased. 4 JUDGE MELLOY: I'm going to overrule. 5 You may answer. 6 I'm aware that IBWC does channel maintenance Α. 7 below Percha. 8 (BY MR. WECHSLER) But you don't know if 0. 9 they're responsible for that or not; is that the 10 distinction you're making? 11 Α. Yes. 12 Does the work that IBWC does below Percha Q. 13 include controlling sedimentation? 14 I don't know if they're controlling it. Α. 15 0. What do -- are they doing any work with 16 sedimentation? 17 Α. I have seen presentations on where they are 18 talking about sediment removal. 19 Q. Fair enough. I think we have an IBWC witness 20 that's better to ask them that question. So let's 21 turn then to credit water release. You testified to 22 the way that Compact credit water is adjusted for 23 evaporation during the year; do you recall that? 2.4 Α. Yes. 25 Credit water is defined by the terms of the 0.

1 Rio Grande Compact? 2 Α. Yes. 3 It represents a credit for water that 0. 4 Colorado or New Mexico is given for deliveries above 5 what is required by the Compact? 6 Α. Yes. 7 Q. You were not personally involved in any of 8 the events involving credit water in 2011; is that 9 right? 10 Α. I was not. 11 You do acknowledge that Articles 6 and 7 of Q. 12 the Compact govern the accounting for credit water; is 13 that right? 14 MR. DUBOIS: Objection; calls for a 15 legal conclusion. 16 JUDGE MELLOY: I'll sustain that. 17 MR. WECHSLER: Very well. I'll just 18 refer Your Honor to Exhibit 1055 at Page 18, RFA No. 19 51. 20 (BY MR. WECHSLER) Let's go ahead and take a 0. 21 look at the Compact then. That's Joint Exhibit 428. 22 Here, we're looking at Page 1. Let's look at Articles 23 1G and 1H, which should be on the first page. There 2.4 it is. You see the Compact actually defines annual

debits and annual credits, does it not?

1 A. Yes, it does.

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- Q. And then we can turn to the next page to look at it, but it also defines credit water. Are you aware of that?
 - A. Yes, I am.
- Q. Are you aware that Article 4, as -- as it was amended by the 1948 Resolution, addresses New Mexico's delivery obligations into Elephant Butte?
 - A. I believe that's the correct article.
- Q. Yeah. Let's look at the resolution here at Page 10, which is the one that switched the delivery point. Oops. And here we can see that -- I'm just looking for the language. Apologize. Let's try the next page. Yeah, if you look -- if you look for -- just as an example, we can look in the last paragraph there. We can see that the -- it says that the Elephant Butte effective supply index, and then it refers to during the calendar year. You see that?
 - A. Yes.
- Q. And we can turn back to Article 6. Are you aware that Article 6 actually states that all credits and debits of Colorado and New Mexico shall be computed for each calendar year?
- MR. DUBOIS: Objection; Your Honor, I'm going to object to this whole line of questioning.

1 Contrary to New Mexico's prior statements, this 2 obviously is intended to continue to pursue the 3 dismissed claim regarding 2011 credit water. 4 MR. WECHSLER: Yeah, Your Honor, I -- I 5 have a number of reactions to that, if you are 6 interested in hearing them. 7 JUDGE MELLOY: Go ahead. 8 MR. WECHSLER: Yeah, so -- so No. 1, 9 Ms. Estrada-Lopez gave a fair amount of testimony yesterday about credit water and credit water 10 11 accounting and the relationship between the Project 12 and the Compact; secondly, we're not -- we understand 13 your ruling. We're not entitled to pursue a claim 14 against the United States, but the credit water issue 15 bears directly on how much water was in 2011 and how 16 much was allocated to New Mexico and how much was 17 allocated to Texas, and, therefore, it bears on the 18 apportionment and the Compact issues and New Mexico's 19 claims against Texas, and for that matter, New 20 Mexico's defenses against Texas for those same years. 21 JUDGE MELLOY: Well, tell me, where --22 where are you going with this, Mr. Wechsler? 23 MR. WECHSLER: Well, her -- her point 2.4 what she was making yesterday -- the point she was 25 making yesterday, Your Honor, was that there's a

1 distinction between Project -- the way the Project deals with credit water and the way the Compact deals 2 3 with credit water, and there's no overlap. And what 4 I'm showing is that, in fact, credit water is defined 5 by the Project. It's defined in an annual way, and --6 and as you'll learn later in the trial, there were 7 changes in the accounting method at the urging of 8 Texas that resulted in additional water going to -- to 9 Texas in that year of 2011. 10 Well, all right. JUDGE MELLOY: You can 11

JUDGE MELLOY: Well, all right. You can ask her about the changes in 2011, but the Compact speaks for itself so let's -- let's get to the -- let's get to that issue.

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MR. WECHSLER: I'm happy to get to that.

I -- I'll -- she does not know about the events in

2011, but I do want to ask her whether or not she

follows some directives from the -- the Rio Grande

Compact Commission. May I ask those questions?

JUDGE MELLOY: You may.

MR. WECHSLER: All right. Thank you.

Q. (BY MR. WECHSLER) So turning away from -- we can take off that joint exhibit, which is the -- the Compact, and let's turn to Joint Exhibit 391. This is going to be this MOU we looked at earlier. And let's turn to Page 13. And here under the definition

1 of, "Approved Method" in the second column. call that out. Here it says that, "An approved method 2 3 is a method of performing a calculation or accounting 4 procedure formally approved by the Commission. 5 adjustment of New Mexico's and Colorado's Compact 6 credit water stored in Elephant Butte Reservoir for 7 loss due to evaporation is an example of an approved 8 method." Do you see that?

A. Yes, I can see that.

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- Q. And when you're performing Project accounting on credit water and conducting evaporation, have you taken into account this MOU between the federal government and the Rio Grande Compact Commission?
- A. I'm pretty sure that this agreement is related to the San Juan-Chama Project accounting so it's not relevant to my Project accounting.
- Q. You think that when it says -- well, you think when it says the -- the adjustment of New Mexico and Colorado's Compact credit water stored in Elephant Butte, that that relates to San Juan-Chama water?
- A. My understanding from this agreement is this is about how the San Juan-Chama Project accounting for the Compact, and San Juan-Chama water is stored in Elephant Butte.
 - Q. So let me just explore that just a little

Are you saying that Reclamation, when it's 1 bit. 2 calculating the amount of water, San Juan-Chama water 3 takes direction from the Rio Grande Compact 4 Commission? 5 From what I recall, the methodologies were Α. 6 reviewed and approved by the Compact Commission. 7 Including the methodology --Q. 8 For San Juan-Chama Project. Α. 9 Thank you. I apologize for interrupting. Q. 10 Does that include the methodologies for evaporation 11 for San Juan-Chama water? 12 Yes, it does. Α. 13 0. Very well. With that understanding, as to 14 your understanding of this document, we can take that 15 Now, let's look at Joint Exhibit 395. 16 will be the Rio Grande Compact Commission Annual 17

- Report for 2005. I think you indicated yesterday, you had looked at some Rio Grande Compact Commission documents; is that right?
- Yes, I have. Α.

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0. And let -- let's look at Page 20. And here, you can see -- let's just call out the top part -- or that's fine. Here you can see this is a memo from the engineer advisors to the Rio Grande Compact Commission, subject, "Accounting of Accrued Rio Grande

1 Compact Credit Water in Project Storage." You see 2 that? 3 Α. Yes, I can see that. 4 0. I think you were aware of this memo, right? 5 Α. Yes, I am. 6 Let's turn to Page 22. Here, just call out Q. 7 that recommendation piece. Here, we see the engineer 8 advisors saying that -- just to read the second one --9 well, the first one indicates that, "The commission 10 direct that the accrued credit water be held constant 11 during the year." See that? 12 Α. Yes, I see that. 13 0. And you're aware that ultimately, the Rio 14 Grande Compact Commission approved these three 15 recommendations of the engineer advisors? 16 Α. Yes. That's my understanding. 17 All right. Let's turn to the 2019 Rio Grande 0. 18 Compact Commission Report. This is the last document 19 we'll take a look at, Ms. Estrada-Lopez. This is New 20 Mexico Exhibit 409. It's the Rio Grande Compact 21 Commission Report from 2019. 22 MR. WECHSLER: I don't know, Your Honor, 23 if this one has been admitted or not. I did not

JUDGE MELLOY: Is there not any

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indicate that in my notes.

1 objection? 2 MS. KLAHN: Is this 2019? It says 2000. 3 It would be -- I assume MR. DUBOIS: 4 that this would be for the prior year so the -- are 5 you referring to after the fact that it covers calendar year 2019 -- I mean -- 1999, actually, I 6 7 suppose. 8 MR. WECHSLER: No. You know what, 9 actually, it looks to me like -- are -- can we just go 10 to the next page? It looks like I may have gotten the 11 wrong exhibit number. Yeah, I'm not intending to call 12 this document up. 13 (BY MR. WECHSLER) Let me just ask you this. 0. 14 We can take this document down. My question, 15 Ms. Estrada-Lopez, is you talked -- you referred 16 yesterday to the methodologies from the -- the Compact 17 Commission for -- for doing -- calculating credit 18 Do you recall that testimony? water. 19 Α. Yes, I do. 20 And you're aware that there are actually 0. 21 three different methods that are identified by the 22 three different states; is that right? 23 Α. For -- yes. There is some years where 24 there's three methods.

And, in fact, those methods are attached to

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1	each one of the the Rio Grande Compact Commission
2	Annual Reports, right?
3	A. Yes.
4	Q. And that's an unresolved issue among the Rio
5	Grande Compact Commission, right?
6	A. That's my understanding.
7	MR. WECHSLER: With that, Your Honor, I
8	have no further questions.
9	Thank you very much for your patience,
10	Ms. Estrada-Lopez.
11	THE WITNESS: Thank you, Mr. Wechsler.
12	JUDGE MELLOY: Mr. Dubois, any redirect?
13	MR. DUBOIS: I have a few questions,
14	Your Honor, not actually very many.
15	MR. WALLACE: Your Honor, this is Chad
16	Wallace.
17	MR. DUBOIS: Oh, I'm sorry.
18	Mr. Wallace.
19	MR. WALLACE: With your permission, Your
20	Honor, I'd like to ask just a few questions. I'll
21	endeavor to be more brief than Mr. Wechsler in his
22	examination.
23	MR. DUBOIS: We appreciate that.
24	JUDGE MELLOY: Go ahead.
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CROSS-EXAMINATION

2 BY MR. WALLACE:

- Q. Ms. Estrada-Lopez, I'm Chad Wallace representing the State of Colorado. How are you doing this afternoon?
 - A. I'm surviving. Thank you.
- Q. I've got a few questions to clarify some of the answers that you've given over the prior two days. Yesterday, while testifying, you stated that Reclamation's determinations about water available as usable water were not binding on the Rio Grande Compact Commission as part of its Compact accounting; is that correct?
 - A. That's what I said.
- Q. So as part of that, your calculations of credit water are not the same thing as the Compact Commission calculations of credit water; is that correct?
 - A. They are not the same thing, correct.
- Q. You also mentioned yesterday that during the irrigation season, the amount of usable water that you have available for allocation can be impacted by other accounts in the reservoir, such as San Juan-Chama or credit water; is that right?
- 25 A. Yes.

1 And the amounts of that credit water can Q. 2 change from actions such as relinquishment by the 3 Compact states? 4 Α. Yes. 5 So that if during an irrigation season, one 0. 6 or more of the Compacting states offers and there's an 7 acceptance of a relinquishment, that changes the 8 usable water available for allocation; is that right? 9 Α. Yes, it does. 10 MR. WALLACE: Thank you. That's all I 11 have. 12 JUDGE MELLOY: Mr. Dubois? 13 MR. DUBOIS: Thank you, Your Honor. 14 REDIRECT EXAMINATION 15 BY MR. DUBOIS: 16 Q. Ms. Estrada-Lopez, I've got a few questions. 17 Let's sort of start at the back and talk about the 18 changes due to relinquishment or other aspects of the 19 credit water. When you're updating the allocations, 20 is there a change in the -- the usable water and the 21 -- the Compact credit water associated with the 22 Compact Commission determination of the amount of 23 credit water in storage, as of December 31st? 24 Α. I update it per that information. Yes. 25 And then do you have to recalculate the 0.

1 evaporation based on whatever the determination of the 2 Compact Commission was? 3 Α. Yes, I do. 4 0. And, again, that's using the URGWOM model? 5 Α. The URGWOM accounting model, yes. 6 And the URGWOM accounting model Q. Yeah. 7 processes were approved by the State of New Mexico; is 8 that right? 9 Α. Yes. 10 0. Okay. Yesterday, there was some questioning 11 from the Court regarding gages and the gaging of 12 I believe that the discussion with the Special water. 13 Master was intended to talk about the gaging of water at the -- at the diversion dams in the canals. 14 15 recall that? 16 Α. Yes, I do. 17 0. And so your -- your response was related to 18 the measurement and -- and gaging at -- at those 19 diversion canals; is that right? 20 Α. Yes. 21 And are there other gages on the river 0. 22 besides the -- the gages at those canals and the 23 Caballo gage run by Reclamation?

In the Project area, does -- does the USGS

No. Well, not in the Project area.

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have gages?

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- A. Yes. I think they do.
- Q. All right. So there are gages on the river at locations other than the canal headings and the Caballo gage that are on the Rio Grande and within the Project area; is that correct?
 - A. Yes, there are.
 - Q. Is the El Paso gage one such gage?
 - A. Yes, it is.
- Q. And who -- who operates and maintains the El Paso gage?
 - A. I believe it's IBWC.
- Q. And where is that located relative to American Dam?
 - A. It is north of American Dam.
 - Q. About how far?
- A. I think it's just a few miles.
 - Q. Okay. You had a discussion with Mr. Wechsler about the diversion ratio as discussed in the EIS, and I believe Mr. Wechsler was suggesting to you that the diversion ratio of less than one means that EBID gets less water -- necessarily gets less water than the D2 relationship would display. Is that -- is that actually correct? Let me rephrase that.
- 25 Isn't the -- isn't the issue with the

1 diversion ratio that what causes a change is whether 2 or not the diversion ratio is consistent with the 3 diversion ratio implicit in the D2 curve? 4 MR. WECHSLER: Objection; leading. 5 understand we're trying to get somewhere here, but 6 it's still a leading question. 7 (BY MR. DUBOIS) Okay. All right. Does the 8 D2 -- Ms. Estrada-Lopez, does the D2 curve represent a 9 constant diversion ratio of one? 10 Yes, I think that makes sense. Α. 11 It makes -- the -- the diversion ratio built 0. 12 into -- or the -- that would be determined from D2 is 13 always one? That an acre-foot of diversion anywhere 14 on the D2 curve -- or an acre-foot of release anywhere 15 on the D2 curve means there would be an acre-foot of 16 aversion? 17 I don't think it's a one-for-one ratio, no. Α. 18 Okay. So does the -- does the D2 curve Q. 19 itself represent a changing diversion ratio? 20 I -- I'm not sure that that's what it 21 represents. I think it represents a relationship in

how much water can be delivered based on a release.

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- But is the diversion ratio, as you go along Q. the curve, always the same?
 - Α. I think, because the slope of the curve

doesn't change, then the ratio would be the same, but
I don't know that that's the same thing as the
diversion ratio.

Okay. Now, with respect to the diversion

- Q. Okay. Now, with respect to the diversion efficiency, Mr. Wechsler listed a number of things that he posited could affect the diversion efficiency in part of your discussion about sedimentation. Do you recall that?
 - A. Yes.

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- Q. One thing he did not mention is the impact of groundwater pumping. Can the impact of groundwater pumping cause a change in the diversion efficiency, as well?
- A. Yes.
 - Q. Is that -- is that a significant cause of the -- no, strike that. That would ask for an expert opinion. We're going to skip that.
 - Mr. Wechsler also played with one of the spreadsheets and changed the diversion ratio from .9 something to .8. Do you recall that?
 - A. Yes, I do.
 - Q. So that would be something over a 10 percent change in the diversion ratio; is that correct?
 - A. Yes.
 - Q. In his hypothetical. Is a 10 percent change

1 in the diversion ratio a small change in that ratio? 2 No, it is not. Α. 3 0. Why not? 4 Α. I would classify a small change as being, 5 like, around 1 percent or less. A 10 percent ratio is 6 one tenth of -- of one -- one ratio, and so that's 7 quite large. 8 You also had an exchange with Mr. Wechsler 0. 9 about the -- about what was purported to be a 1985 10 operating agreement. Do you recall that? 11 Α. Yes, I do. 12 I'm trying to recall the exhibit number Q. 13 offhand, and I -- and I don't. I apologize. 14 MR. WECHSLER: You might try -- sorry to 15 interrupt. You might try Joint 440. 16 MR. DUBOIS: Thank you. I had just 17 found that myself. Joint 440. Thank you. 18 (BY MR. DUBOIS) Do you know if -- if the Q. 19 document, Joint 440, the operating agreement from --20 or the purported operating agreement from 1985, do you 21 know if that was ever signed by the districts and the 22 United States? 23 Α. I've never seen signatures on it. 2.4 Q. Okay. To the best of your knowledge, was

that ever adopted by the districts and the United

1 States as a -- an operating policy binding on all of 2 the parties? 3 I don't think so. Α. 4 0. Okay. You also had an exchange with 5 Mr. Wechsler about releases of 790,000 and how that is used in the allocation sheet. Do you remember that? 6 7 Α. Yes, I do. 8 Is 790,000 acre-feet a cap on releases from 0. 9 storage in a given year? 10 Α. No, it's not. 11 Are there years in which more than 790,000 0. 12 acre-feet have been released from Caballo Reservoir? 13 Α. Yes, there are. 14 Do you have a rough idea of what percentage 0. 15 of the years of -- of record have releases in excess 16 of 790,000 from Caballo Reservoir? 17 I'm sorry, I don't. Α. 18 Is the -- is the -- is the Q. Okay. 19 790,000 acre-foot limit, if you will -- I think that 20 you -- you testified that it is a limit. What is it a 21 limit for? 22 In the operating agreement allocation Α. 23 spreadsheet, it is used to limit the volume of water for the current year allocation process. 2.4

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Q.

Okay.

1 Thank you, Your Honor. MR. DUBOIS: Ι 2 don't have any additional questions for 3 Ms. Estrada-Lopez today. 4 JUDGE MELLOY: Mr. Wechsler, any further 5 cross? 6 MR. WECHSLER: No thank you, Your Honor. 7 JUDGE MELLOY: All right. Thank you --8 MS. KLAHN: Your Honor --9 JUDGE MELLOY: I'm sorry. Ms. Klahn, do 10 you have something? 11 MS. KLAHN: I don't have any questions 12 for Ms. Estrada-Lopez, but I do have one more item to 13 raise regarding this examination, if I could. 14 JUDGE MELLOY: Go ahead. 15 MS. KLAHN: Yesterday, the Court 16 admitted a number of exhibits, and Mr. Wechsler did 17 not rely on all of the exhibits that were admitted. 18 We'd like to move to strike the exhibits that he did 19 not rely on with this witness. Of course, without 20 prejudice, he could come back and try and use them 21 again, but rather than have the record filled with 22 exhibits that don't have any context by relation to 23 testimony, we'd propose to take this course of action. 24 JUDGE MELLOY: Mr. Wechsler, what's your 25 response?

MR. WECHSLER: Yeah. We would object to that, Your Honor. Obviously, had we known -- the process was established ahead of time. Had we known ahead of time that the rule would be we had to have Ms. Estrada-Lopez talk about those exhibits, we would have done that, or we may have offered them and presented them directly through her. There might be some of those exhibits, and I don't know offhand, that we would have offered through her rather than another witness, and so, again, the rules of the game were established long ago. These were present in your -your Trial Management Order dating back to April 9th, 2001, where you indicated for Category A, documents to which neither party objects, quote, "They will be deemed admitted in evidence at the commencement of the trial and will be available for use by any party at any stage of the proceeding without further offer, proof, or objection, " and that was confirmed in our status conference from last week for exhibits that were not objected to as part of the five -day process. Well, I'm going to --JUDGE MELLOY: I'll deny the motion without prejudice to re-urging it at the end of the case if these exhibits are never used for any purpose. I certainly would be willing to

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entertain a motion at that time to, you know,

1	essentially clean up any extraneous exhibits, but
2	but just because an exhibit is not necessarily used in
3	the examination of a witness doesn't mean it's not
4	relevant or admissible, and I think Mr. Wechsler's
5	right, we had indicated in the pre-trial order that
6	they would be admitted, and so I'm going to deny the
7	motion to strike.
8	Anything further with this witness?
9	MS. KLAHN: No, Your Honor.
10	JUDGE MELLOY: All right. Then,
11	Ms. Estrada-Lopez, you're free to you're done.
12	You're free to go.
13	THE WITNESS: Thank you.
14	JUDGE MELLOY: Thank you.
15	MR. WECHSLER: Thank you,
16	Ms. Estrada-Lopez.
17	So, Your Honor, if I may, I'm going to
18	switch places with Ms. Thompson.
19	MR. DUBOIS: Your Honor, there's going
20	to be a couple of switching of places.
21	JUDGE MELLOY: Well
22	MR. DUBOIS: Do you want to take five
23	minutes while we rearrange?
24	JUDGE MELLOY: Yeah. And we need to do
25	take a look at our evidence binders, too, so let's

1	let's take a ten-minute break, and then we'll come
2	back. What time is it now? We'll be back at at
3	4:10.
4	(Recess.)
5	JUDGE MELLOY: All right. Are we ready
6	to go? Do we have everyone back?
7	MS. NAJJAR: We're ready.
8	MS. THOMPSON: Yes, Your Honor.
9	JUDGE MELLOY: I guess I don't have my
10	video on, do I? There we go. All right. Let me
11	start is it Spener? Am I pronouncing that
12	correctly?
13	THE WITNESS: That is correct, Your
14	Honor.
15	JUDGE MELLOY: Will you raise your right
16	hand, please? Do you swear or affirm that the
17	testimony you're about to give will be the truth, the
18	whole truth, and nothing but the truth?
19	THE WITNESS: I do.
20	JUDGE MELLOY: Would you please state
21	your name for the record and spell your name, please?
22	THE WITNESS: Sally Spener, S-A-L-L-Y,
23	S-P-E-N-E-R.
24	JUDGE MELLOY: We're asking all the
25	witnesses a couple of preliminary questions,

1 Ms. Spener. First of all, is there anyone in the room 2 with you, other than yourself? 3 THE WITNESS: No, there is not. 4 JUDGE MELLOY: Do you have any materials 5 that you will be referring to during your testimony. 6 THE WITNESS: No, I do not. 7 JUDGE MELLOY: Finally, I want to 8 caution you that you're not allowed to have any 9 communication devices such as laptops, iPhones, or 10 e-mail/texting capability so with that understanding, 11 we'll proceed. 12 So who's going to be -- for this portion 13 of the proceedings, let me ask the parties to enter 14 their appearance. For Texas, Ms. Klahn, you're still 15 online? 16 MS. KLAHN: Yes. 17 JUDGE MELLOY: Okay. And for United 18 States? 19 MS. NAJJAR: Good afternoon, Your Honor. 20 Jennifer Najjar on behalf of the United States. 21 And for New Mexico? JUDGE MELLOY: 22 MS. THOMPSON: Good afternoon, Your 23 Honor. Lisa Thompson for the State of New Mexico. 24 JUDGE MELLOY: All right. And are you 25 going to be going first, Ms. Najjar, or is it Ms.

1 Klahn? 2 MS. NAJJAR: Yes, Your Honor, I'll be 3 going first. 4 JUDGE MELLOY: Go ahead. 5 MS. NAJJAR: The United States calls 6 Ms. Sally Spener. 7 SALLY SPENER, 8 having been first duly sworn, testified as follows: 9 DIRECT EXAMINATION 10 BY MS. NAJJAR: 11 Q. Could you please state your name for the 12 record? 13 Α. My name is Sally Spener. 14 0. And what have you been asked to come testify 15 about today? 16 Α. The purpose of my testimony today is to 17 provide background information about the International 18 Boundary and Water Commission United States and 19 Mexico, especially the United States section of the 20 commission, and about the Convention of 1906 between the United States and Mexico for the equitable 21 22 division of waters of the Rio Grande. 23 0. Have you ever testified in court before? 24 Α. No, I have not. 25 Ms. Spener, could you please tell the Court 0.

1	about your educational background?
2	A. I have a bachelor's degree from Wesleyan
3	University in Middletown, Connecticut.
4	Q. What was your major?
5	A. I was a double major in theater and Latin
6	American studies with a focus on history, specifically
7	Mexican history.
8	Q. Did you conduct a senior thesis or senior
9	project of some sort?
LO	A. Yes, I did.
L1	Q. What was that about?
L2	A. It was a research project about a precursor
L3	movement to the Mexican Revolution based in the border
L4	state of Sonora.
L5	Q. Let's talk a little bit about your employment
L6	now. Where are you currently employed?
L7	A. I'm currently employed by the United States
L8	Section of the International Boundary and Water
L9	Commission United States and Mexico.
20	Q. And may I just refer to that as USIBWC?
21	A. Yes, you may. And I may refer to it as the
22	U.S. Section, as well.
23	Q. What is your current title?
24	A. My current title in accordance with the 1944
25	Water Treaty is United States Secretary My divil

1 service title is Foreign Affairs Officer. 2 We'll talk about the 1944 Treaty in a little 3 while, but are those two titles interchangeable? 4 Α. They are essentially interchangeable. 5 They're both correct. When I am dealing in an 6 international context with counterparts from Mexico, I 7 would use the title of secretary in that particular 8 context. 9 And how long have you been employed by Q. 10 USIBWC? 11 I've been employed by USIBWC since 1999. Α. 12 Q. So roughly 22 years? 13 Α. That's correct. 14 And of those 22 years, how long have you been Q. 15 serving as secretary? 16 Α. I have been the secretary since 2012. 17 Prior to your role as secretary, did you hold 0. 18 any other position? 19 Α. Yes, I did. 20 What was that? 0. 21 I was the public affairs officer for the U.S. 22 Section from 1999. There were a couple breaks in that 23 such as when I had a temporary promotion to U.S. 24 Secretary. 25 0. You previously mentioned that you work for

1 the USIBWC. Is there another section? 2 Yes, there is, the Mexican section of the 3 International Boundary and Water Commission. 4 0. Could we please pull up what has previously 5 been marked as Spener Demonstrative 01? 6 Generally, how are the two sections of IBWC 7 structured? 8 Well, we have the International Boundary and Α. 9 Water Commission United States and Mexico as an 10 international organization, but then within that, we 11 have the United States Section and then we also have 12 the Mexican Section. 13 Who heads each section? 0. 14 Each section is headed by an engineer Α. 15 commissioner appointed by his or her respective 16 federal government. 17 And who are the treaty officers? 0. 18 The treaty officers are the two Α. 19 commissioners, the two secretaries, one from each 20 We have two principal engineers, two from 21 the United States and two from Mexico, and then each 22 section has a legal advisor. There are also other 23 people who are not considered treaty officers, but who 24 are employees of the two sections.

And are the two sections administered

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1 independently of each other? 2 They are. The United States Section is Α. Yes. 3 an independent federal commission of the U.S. 4 government, and the Mexican Section is likewise a part 5 of Mexico's federal government. 6 What is the mission of IBWC? 0. 7 Α. The mission of the International Boundary and 8 Water Commission United States and Mexico is to apply 9 the boundary and water treaties between those two 10 countries and to settle differences that arise in the 11 application of the treaties. 12 Let's talk about the U.S. Section in a little Q. 13 more detailed. Where is it headquartered? 14 The headquarters of the U.S. Section is in El Α. 15 Paso, Texas. 16 Q. Could we please turn to what has previously 17 been marked as Spener Demonstrative 2? 18 Could you please describe to the Court what 19 we are seeing here? 20 Α. 21

A. This is an organizational chart for the U.S. Section of the IBWC, and it is showing the executive office of the commissioner and then the three major departments of the commission.

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Q. Which office or department do you fall under as secretary?

1 As secretary, I am in the Foreign Affairs Α. 2 Office that is considered to be part of the executive 3 office of the commissioner. I want to talk a little bit in more detail 4 0. 5 about this, and specifically what you said about the 6 three main departments. Could we please turn to what 7 has previously been marked as Spener Demonstrative 3? 8 Could you please describe the various 9 components in the engineering department? 10 So the engineering department is responsible Α. 11 for, as it implies, the engineering work of the 12 Commission. That includes our environmental 13 management division, so responsible for environmental 14 compliance, if we're doing habitat restoration 15 projects, water quality monitoring, et cetera, that 16 would fall under the environmental management 17 We also have the engineering services division. 18 division, and that primarily comprises our design 19 function, as well as our construction division, as 20 well as other sorts of technical studies that may be 21 required. 22 Could we please turn to Spener Demonstrative Q. 23 4?

Could you elaborate a little bit more on the operations department?

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1 The operations department is the largest Α. 2 department that we have at the USIBWC. That is 3 primarily because it is where we have our operations 4 and maintenance division. That is the division that 5 is responsible for operating and maintaining our 6 infrastructure all along the U.S./Mexico border on the 7 U.S. side, primarily through various field offices, so we do things like operate and maintain flood control 8 9 projects, diversion dams, storage dams, hydroelectric 10 power plants, wastewater treatment plants, maintaining 11 the boundary demarcation features along the U.S./Mexico border. We also have our security 12 13 division, and safety is also part of the operations 14 department, and then we have our water accounting 15 division, and the water accounting division is the 16 part of our agency that is responsible for determining 17 the national ownership of waters, and they deal with 18 our gaging stations and the data that is associated 19 with that.

Q. Could we please turn to what has been marked as Spener Demonstrative 5, and, Ms. Spener, could you please elaborate on what components are part of the administration department?

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A. So our administration department is something that I think would be typical of most agencies. So we

have our acquisitions division, which is our procurement contracting office. We have our budget function, accounting, IT, known as our information management division, are some of the major parts of our administration department.

- Q. And you mentioned that you work in the Foreign Affairs Office, so could we please bring up Spener Demonstrative 6. Let's talk a little bit more about what your role looks like generally. What responsibilities does this position as secretary entail?
- A. So generally, I supervise both the Foreign
 Affairs and Public Affairs functions of the Commission
 of the U.S. Section.
- Q. Could you please tell the Court some of your general responsibilities as it relates to the public affairs section?
- A. Yes. In terms of public affairs, that involves media relations, so responding to inquiries from the news media, preparing news releases, setting up and conducting interviews, that sort of thing. We also have our stakeholder outreach activities, and that is a whole range of stakeholders who are interested in the work that we do. That includes conducting public meetings through a program I

established called, "The Citizens Forum Program," which are public meetings where we share information with the public about our activities and hear about other entities work along the U.S./Mexico border. There's also an internal communication function that is part of that, such as, you know, providing information and briefing to our own personnel about our work, and then we also handle special events, ribbon-cutting ceremonies, groundbreaking ceremonies. We recently had a swearing-in ceremony for our new commissioner.

- Q. Could you please tell the Court a little bit more about your responsibilities as it relates to the Foreign Affairs Office?
- A. Yes. So for the Foreign Affairs Office, I'm involved in various activities. This includes providing foreign policy advice to the commissioner, the principal engineers, and other staff regarding our obligation under the treaties and minutes, which are binding implementing agreements to the treaties. I am very closely involved in negotiating, drafting, and finalizing international agreements between the United States and Mexico on issues related to the boundary and water treaties. I supervise the translation and interpretation function because, of course, we have

documents and speakers in both English and Spanish. I review all correspondence that is exchanged between the U.S. Section and the Mexican Section of the Commission to ensure that it is consistent with our obligations under the international agreements, and so those are some of the major aspects of -- of what I do in addition, of course, to coordinating on a near-daily basis with my counterpart in the Mexican Section of the Commission and organizing Commission meetings.

Q. You mentioned Commission meetings. What exactly is a Commission meeting?

A. A Commission meeting is a formal meeting between the U.S. and Mexican Sections of the International Boundary and Water Commission that would have the participation of the commissioners, principal engineers, and secretaries from both sections, as well as additional technical personnel, depending on the specific topic or topics of a meeting.

Q. What is the purpose of hosting a Commission meeting?

A. So a Commission meeting relates to our responsibilities to apply the boundary and water treaties between the two countries, so we review our activities under the boundary and water treaties, we

coordinate operation and maintenance of the infrastructure that we're responsible for under the treaties, and address any policy issues that require our attention.

- Q. You mentioned that IBWC is responsible for applying the boundary and water treaties between the United States and Mexico. What treaties or conventions exist between the United States and Mexico related to the shared waters at the border?
- A. So we have a treaty that is commonly referred to as the 1944 Water Treaty. It has a rather long name, but most people know it as the 1944 Water Treaty. And then we also have the Convention of 1906 for the equitable distribution of the waters of the Rio Grande.
- Q. Let's talk about each of those in turn.

 Could you tell me a little bit more about the 1944

 Water Treaty?
- A. The 1944 Water Treaty established a modern-day International Boundary and Water Commission, and, in fact, that is how we got our name of International Boundary and Water Commission. It established the structure that was shown in a previous slide, and it also provides for the sharing of waters, the Rio Grande from Fort Quitman to the Gulf of

Mexico. Fort Quitman is a location on the Rio Grande about 90 miles downstream from El Paso, Texas, Cuidad Juarez, Chihuahua. It also provides for the distribution of waters of the Colorado River, and it also addresses the Tijuana River and lays out an expectation of a possible future agreement providing for the division of waters of the Tijuana River.

O. What is the Convention of 1906?

A. The Convention of 1906 is the treaty that provides for the distribution of the waters of the Rio Grande in a separate geographical area from that of the 1944 Treaty, that separate geographical area being the region of El Paso, Texas through Cuidad Juarez, Chihuahua, so it allots Rio Grande water to Mexico at Cuidad Juarez or the Juarez Valley.

MS. NAJJAR: Could we please pull up what has previously been marked as Joint Exhibit 439.

- Q. (BY MS. NAJJAR) Ms. Spener, you're seeing what has been marked as Joint Exhibit 439, and I do not believe there are any objections to this exhibit, but do you recognize this document?
 - A. Yes, I do.

- Q. What do you recognize it to be?
- A. It looks like it is a copy of the Convention of 1906.

1 Is there a statutory version? 0. 2 Α. Yes. 3 And how do you recognize this document? 0. 4 Α. I recognize this document because it's a 5 document that I have referred to on numerous occasions 6 during the course of my employment with the USIBWC. 7 MS. NAJJAR: Your Honor, we offer Joint 8 Exhibit 439 into evidence. 9 JUDGE MELLOY: Any objection? 10 MS. THOMPSON: No, Your Honor. 11 JUDGE MELLOY: Hearing none, Joint 12 Exhibit 439 is admitted. 13 (BY MS. NAJJAR) Ms. Spener, you mentioned 0. 14 that the 1906 Convention provides for the equitable 15 distribution of Rio Grande water to Mexico. How does 16 the Convention of 1906 provide for the equitable 17 distribution of water? 18 The Convention of 1906 provides for the Α. 19 delivery to Mexico, as you can see on your screen, of 20 a total of 60,000 acre-feet of water annually in the 21 bed of the Rio Grande at the point where the head 22 works of the Acequia Madre, known as the old Mexican 23 Canal, now exists above the city of Juarez, Mexico. 24 So just in summary, we say that it allots for 60,000 25 acre-feet of water per year to Mexico for Juarez.

1 And is 60,000 acre-feet always delivered? 0. 2 Α. There are exceptions to that. 3 What do you mean by "exceptions"? 0. Well, under Article 2 of the Convention of 4 Α. 5 1906, it states, as you see on your screen, that in 6 the case of extraordinary drought or serious accident 7 to the irrigation system in the United States, the 8 amount delivered to the Mexican Canal shall be 9 diminished in the same proportion as the water

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United States.

Q. In general terms, is it fair to just refer to this as a proportional reduction?

delivered to lands under said irrigation system in the

- A. Yes. That is what we commonly refer to it as, the proportional reduction.
- Q. So what is IBWC's role in ensuring that the water is delivered to Mexico in compliance with the Convention of 1906?
- A. So when it is a full allocation year, certainly we are responsible for making sure that the 60,000 acre-feet are delivered or the appropriate proportional reduction. We also operate and maintain two diversion dams, American Dam and International Dam.
 - Q. And does -- what is IBWC's role in managing

the Rio Grande Project?

- A. The USIBWC does not manage the Rio Grande Project. That is managed by the U.S. Department of the Interior Bureau of Reclamation.
- Q. Ms. Spener, how would gains or losses in the Rio Grande impact the United States obligation under the Convention of 1906 in a year where there are no exceptional circumstances like extraordinary drought?
- A. So our obligation is to deliver to Mexico 60,000 acre-feet, regardless of gains or losses in the river. So we must meet the 60,000 acre-feet unless those exceptions apply, and Mexico would not be entitled to more than that, if there were gains.
 - Q. Who is responsible for conveyance losses?
- A. The United States. The treaty provides that the United States shall assure delivery to Mexico of the specified volumes.
- Q. Who is responsible for losses caused by unauthorized pumping for the Rio Grande above Acequia Madre?
- A. Again, the United States has that responsibility. If we are not policing the river and some unauthorized individual were pumping water out of the river, we would still need to meet our obligations under the treaty.

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Q. Let's talk a little bit more about IBWC's role in ensuring that those treaty obligations are met. Generally, what is IBWC's role in determining the volume of water owed to Mexico?

- A. So we need to make sure that when it is a full supply year that the appropriate volume of 60,000 acre-feet is allocated to Mexico, and then we also coordinate with Reclamation and others to review the information and make sure that the allocation to Mexico, in accordance with the treaty, is -- is carried out.
- Q. How do you obtain the data about the volume of allocations in a given year?
- A. So we have regular communication with Reclamation. We exchange letters with them. We meet with them regularly. They provide briefings, and then we also have meetings with Reclamation, the Mexican Section of the Commission, the Mexican Irrigation District, and the U.S. Irrigation Districts. Those are typically held monthly during the irrigation season or just prior to the irrigation season so there's a lot of communication and transparency.
- Q. What department at USIBWC determines the amount of water owed to Mexico?
 - A. The water accounting division within the

operations department is the part of the USIBWC that works closely with Reclamation to review the data and also informs Mexico of its allocations under the Convention of 1906.

- Q. Let's talk a little bit more about when the water is delivered to Mexico under the Convention of 1906. Under the Convention of 1906, how are deliveries scheduled?
- A. So the Convention of 1906 actually has a schedule in it, and it provides for deliveries to Mexico on -- for certain months out of the year, and you can see that on your screen, starting in February and going through November, and then the acre-feet per month that are noted on the exhibit is for a year when there is a full allocation of 60,000 acre-feet.
 - Q. Is this delivery schedule always followed?
- A. No. It is not. There are occasions when there are deviations from this schedule. There have been deviations on a regular basis since about 1940.
 - Q. Are those deviations required or mandatory?
- A. No, they are not. It is something that is done through an administrative arrangement of the U.S. and Mexican governments, and it is done on a voluntary basis out of consideration for the request of Mexico to diverge from the delivery schedule.

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Q. If the treaty specifies a schedule to Mexico, then what is the process of how this deviation occurs?

A. So the administrative arrangement that has existed for many decades is a process that is known as an exchange of diplomatic notes where the Mexican government sends a diplomatic note requesting that there be changes to the delivery schedule.

- Q. Could you explain what a diplomatic note is?
- A. A diplomatic note is a type of diplomatic communication. In this case, it is between the Secretary of Foreign Relations in Mexico and the U.S. Department of State.
- Q. Could you explain how a diplomatic note works in relation to the 19 -- the Convention of 1906?
- A. Yes. So as I mentioned, this is something that's been going on for decades and so what happens is early in the year, the Mexican government sends a diplomatic note, again, from its Secretary of Foreign Relations to the U.S. Department of State asking that the International Boundary and Water Commission be authorized to diverge from the schedule that exists in the Convention of 1906 based on Mexico's request for changes to the delivery schedule. The U.S. Department of State then sends a note in response, and that diplomatic note indicates that they are authorizing

the U.S. commissioner to modify the schedule as the U.S. commissioner determines appropriate based on Mexico's request, and then as we have -- as I -- I believe was noted in previous testimony, the allocations tend to change on a monthly basis, and so Mexico, as Mexico is informed of their allocations on a monthly basis, they send us their updated schedule and then we implement the schedule or the commissioner agrees to the schedule if he deems that's appropriate.

- Q. Since we're discussing USIBWC's role in ensuring that the United States treaty obligations are met, let's talk about the 2008 Operating Agreement. Are you familiar with the 2008 Operating Agreement?
- A. Yes.

- Q. How are you familiar with it?
- A. When it was first being discussed or adopted, so about 13 years ago, I had the opportunity to review it and try to understand it and understand how it would or would not impact our responsibilities.
 - Q. What did the USIBWC conclude?
- A. So we concluded that the 2008 operating agreement did not impede our ability to fulfill our obligations to Mexico under the Convention of 1906, that it was consistent with the requirements of that treaty.

1	Q. And did the Mexican Section of the IBWC have
2	the opportunity to review the 2008 Operating
3	Agreement?
4	A. Yes.
5	MS. NAJJAR: Ms. Spener, I don't have
6	any further questions for you at this time.
7	JUDGE MELLOY: Need to un-mute here.
8	I'm sorry. Ms. Thompson, you may proceed.
9	MS. THOMPSON: Thank you, Your Honor.
10	CROSS-EXAMINATION
11	BY MS. THOMPSON:
12	Q. Good afternoon, Ms. Spener.
13	A. Good afternoon.
14	Q. My name is Lisa Thompson. I'm an attorney
15	with the State of New Mexico. I don't believe we have
16	met before.
17	A. I don't believe so.
18	Q. I just have a few follow-up questions. Seems
19	like you were lucky enough to go second and much
20	faster.
21	A. I was lucky.
22	Q. Yes. So the USIBWC is responsible for
23	ensuring compliance with the Convention of 1906,
24	correct?
25	A. Yes.

1	Q. In other words, IBWC is responsible for
2	assuring Mexico gets its water entitlement under the
3	Convention, correct?
4	A. Yes.
5	Q. And you're one of the treaty officers for the
6	1906 Convention, right?
7	A. Yes.
8	Q. And my understanding is that you also serve
9	as an expert advisor on treaty interpretation; is that
10	right?
11	MS. NAJJAR: Objection. This witness is
12	offered as a percipient witness.
13	MS. THOMPSON: I understand that she's a
14	percipient witness.
15	JUDGE MELLOY: Well, she's just asking
16	if she's I'm going to overrule at this point.
17	We'll see where this is going. You may answer.
18	Q. (BY MS. THOMPSON) My understanding is you're
19	an expert advisor on treaty interpretation; is that
20	right?
21	A. I do provide I do conduct research and
22	provide advice to the commissioner and the principal
23	engineers.
24	Q. And you accompany the U.S. commissioner to
25	commission meetings; is that right?

1 Α. Yes. 2 To your knowledge, you're the only IBWC 3 witness that's being called by the U.S. or Texas; is 4 that right? 5 Α. I'm not sure. 6 So I want to go back and look then a little Q. 7 bit closer at the Convention, which is Joint Exhibit 8 I just want to go back through -- we went 9 through it pretty quickly, so I want to go back 10 through and confirm some of the provisions. Okay? 11 Α. Okay. 12 So Article 1 requires the U.S. delivery to Q. 13 Mexico a total of 60,000 acre-feet annually, correct? 14 Α. Yes. 15 And that's measured at the head of the 0. 16 Acequia Madre, correct? 17 Α. Yes. 18 And then as you mention, Article 2 then 19 confirms that the U.S. must assure those deliveries to 20 Mexico, correct? 21 Α. Yes. 22 And under Article 2, as you mention, that Q.

delivery must be distributed in the same proportions

as the water supply proposed to be furnished to what

I'll shorthand as EP1, if that's okay?

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A. Article 2 states, "The delivery of the set
amount of water shall be assured by the United States
and shall be distributed through the year in the same
proportions as the water supply proposed to be
furnished from the said irrigation system to lands in
the United States in the vicinity of El Paso, Texas,
according to the following schedule as nearly as may
be possible."
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- Q. And is that area in the vicinity of El Paso, Texas, is your interpretation, is that the area of EP1?
- A. I am aware that the irrigation district in El Paso, Texas is the El Paso County Water Improvement District No. 1, commonly known as EP No. 1.
- Q. Thank you. And Article 2 also has, as you mentioned, a schedule that, according to Article 2, those deliveries are supposed to conform with that schedule as nearly as may be possible; is that right?
- A. Article 2 states, yes, that it is the following schedule, "According to the following schedule, as nearly as may be possible."
- Q. And under that schedule in the convention, there's columns for the month, the amount, and the corresponding CFS, correct?
 - A. Right. I -- I -- I believe that is not

correct. I don't believe it is CFS. It's just cubic feet.

Q. Thank you. The delivery, though, the point I want to make and ask you about is that it's not a

delivery for year-round delivery; is that right?

- A. The schedule includes deliveries for ten months out of the year, so there are two months -- two winter months where the schedule does not show deliveries.
- Q. And is it your understanding that this delivery is to match with the irrigation season deliveries?
- A. So the treaty addresses irrigation needs and deliveries, so yes.
- Q. And, in fact, the treaty mentions in the first proclamation, if you want to skip back to the first page, that it's the equitable distribution of water of the Rio Grande, quote, for irrigation purposes; is that right?
 - A. That is what it says, yes.
- Q. And as you mentioned, the delivery schedules have, in fact, not historically followed the Article 2 schedule, correct?
 - A. That's correct.

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Q. And as I understand it, that's because

through diplomatic notes, the deliveries are adjusted 1 every -- pretty much every year from that established 2 3 treaty schedule; is that right? 4 Α. That's correct. 5 Is it your understanding that historically, 0. 6 in fact, the deliveries have occurred mostly from 7 March through September and maybe October? 8 I do not have the full record and familiarity with the whole record of -- of delivery, but certainly 9 10 in recent years, March to September more or less has 11 -- has been the time when irrigation deliveries are 12 made, but it does -- it can vary. 13 0. 14 15 the U.S. Project lands? 16 Α.

- Is that because it's typically where the deliveries are happening concurrent with deliveries to
- I'm not sure I understand your -- your question. Could you rephrase it --
 - Q. Sure.

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- Α. -- or ask it again?
- The deliveries that are occurring in the March through September/October time frame, is it your understanding that those are occurring typically concurrent with deliveries to the U.S. Project lands?
 - Α. That is not necessarily the case, no.
 - Do the irrigation districts and the USIBWC 0.

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try to coordinate so that those deliveries are occurring concurrently?

- A. Yes.
- Q. And Article 2 also says that there's -- if there's an extraordinary drought, the amount of water delivered to Mexico must be diminished in the same proportion as the water delivered to the U.S. Project lands; is that right?
- A. It says, "As the water delivered to lands under said irrigation system in the United States."
- Q. And do you understand that to mean to be delivered to lands for the Project in the United States, the Rio Grande Project?
- A. So I understand it to mean exactly what it says, "to lands under said irrigation system in the United States," and I'm certainly aware that the Rio Grande project geographical region is in this area that is affected by the Convention of 1906.
- Q. And how has extraordinary drought, that term, been historically interpreted by the IBWC?
- A. There is no definition of extraordinary drought, but there have been numerous years when there has been a proportional reduction applied to Mexico.
- Q. Is it your understanding then that any time there's less than a full supply or full allocation to

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the U.S. lands that, in fact, the Mexico allocation is then proportionally reduced?

When there is less than a full supply, if it Α. is due to extraordinary drought or accident to the irrigation system in the United States in accordance with the treaty, the amount delivered to the Mexican Canal shall be diminished in the same proportion as the water delivered to lands under said irrigation system in the United States.

- So then what's your criteria for 0. extraordinary drought based on that answer?
- So, again, there have been -- there is no Α. definition of extraordinary drought, but there have been numerous proportional reductions applied to Mexico because there are reduced allocations.
- Q. In your experience then, is there any time that there is less than a full supply, those proportional reductions occur?
- Α. So when there is less than a full -- when there is less than 60,000 acre-feet provided to Mexico, then there would be -- that would be considered a proportional reduction.
- If the U.S. lands are reduced in their 0. project delivery is 50 percent, isn't it true then that there is a proportional reduction to the Mexico

1 allocation of approximately 50 percent? MS. NAJJAR: Objection; assumes facts 2 3 not in evidence. 4 MS. THOMPSON: Your Honor, I'm just 5 trying to understand her interpretation of how the 6 reduction occurs. 7 JUDGE MELLOY: Overruled. The witness 8 may answer the question. 9 Could you ask the question again? Α. 10 Sure. If the delivery to 0. (BY MS. THOMPSON) 11 the U.S. lands is reduced 50 percent, then -- below a 12 full allotment or full allocation, then Mexico's total 13 treaty entitlement of 60,000 acre-feet would also get 14 reduced approximately 50 percent; is that right? 15 So that's a hypothetical scenario, but in 16 general, that is how a proportional reduction would be 17 applied. 18 And, therefore, based on that, then IBWC 0. 19 needs to know then whether, in fact, there's a full 20 allocation determined each year; is that right? 21 Α. Yes. 22 And IBWC would need to know whether or not Q. 23 there's going to be less than a full allocation each 2.4 year, correct? 25 Α. Yes.

1	Q. And during your 22 years at IBWC, have you
2	had the opportunity to investigate how the Mexico
3	treaty entitlement is determined in a reduced
4	allocation year by Reclamation?
5	A. Could you repeat that question, please?
6	Q. Sure. During your time or your 22 years at
7	IBWC, have you investigated how the Mexico treaty
8	entitlement is calculated for a reduced allocation by
9	the Bureau of Reclamation?
10	A. So I don't think I would say that I have
11	conducted an investigation, no.
12	Q. Are you aware that others at IBWC have asked
13	the same question and investigated how that reduction
14	is calculated?
15	A. So I guess I'm not sure what you mean
16	by "investigated."
17	Q. Sure. Let's look at Joint Exhibit 0469.
18	It's already been admitted. This is a memo that
19	appears to have the International Boundary and Water
20	Commission header at the top for United States and
21	Mexico Section, correct?
22	A. This appears to have could you state that
23	again, please?
24	Q. I was just identifying the document, the
25	header on the document, that it states it's from the

1 International Boundary and Water Commission, United 2 States and Mexico, United States Section? 3 Α. That's correct. 4 0. And this document is dated June 29th, 1956, 5 correct? 6 Α. Yes. 7 Appears to be an official record of the IBWC. Q. 8 Would you agree with that? 9 It appears to be an official record of the Α. 10 USIBWC, yes. 11 And the subject of this document is the 1906 Q. 12 Treaty deliveries to Mexico. Do you see that? 13 Α. Yes, I see that. 14 And the participants on this document include 0. 15 both an individual from the Bureau of Reclamation, as 16 well as individuals from the International Boundary 17 and Water Commission. Do you see that on the 18 document? 19 Α. Yes. 20 Have you reviewed this document before? 0. Prior to this trial, I don't believe I've 21 Α. 22 seen this document before. 23 Okay. When you reviewed this document, did 0. 24 you understand, based on the first paragraph, that in 25

this document, Mr. Resch from Bureau of Reclamation,

the author, excuse me, and Mr. Resch met to learn and discuss the manner of determination during years of inadequate supply of the allotment to waters -- excuse me -- supply of the allotment of water to land in the United States Rio Grande Project?

A. So I am aware -- I was made aware recently that this was one of the exhibits, but it's not an

- A. So I am aware -- I was made aware recently that this was one of the exhibits, but it's not an exhibit that I was familiar with previously. So if you're asking me does it say what you just said it said, I can read it to you and tell you what it says.
- Q. When you had the chance, Ms. Spener, to review this document, did you understand that it lists steps for calculating the reduction to the Mexico treaty entitlement?
 - A. Could you ask that question again, please?
- Q. Sure. When you reviewed this document, did you understand that it included steps on calculating the Mexico full supply -- excuse me -- the Mexico allocation under the treaty?
- A. So if you could show me other parts of the document, I might be able to answer that question if I see that that is included in the document.
 - Q. Sure.

MS. NAJJAR: Your Honor, objection; foundation. Ms. Spener has testified that she wasn't

1 made aware of this document until I think it was 2 disclosed within the last 24 or 48 hours by New 3 Mexico. 4 MS. THOMPSON: Your Honor, it's an 5 official record of the IBWC and details how, in fact, 6 Mexico gets a reduction from full allocation, so I'm 7 trying to explore whether or not this witness 8 understands those steps, not that she has actually 9 seen this particular document. 10 MS. NAJJAR: This is a document from 11 1956. Ms. Spener said she's not familiar with it. 12 JUDGE MELLOY: Well, it seems to me the 13 document speaks for itself, and this witness has 14 testified that she's just recently seen it. It's a 15 I think it's of somewhat marginal relevance. 16 I'm going to sustain the objection. 17 0. (BY MS. THOMPSON) Ms. Spener, do you 18 understand the way a full allocation to the U.S. 19 Project lands is determined? 20 MS. NAJJAR: Objection; foundation. 21 JUDGE MELLOY: She can answer that 22 question if -- if she's aware. 23 Α. I have a general understanding of that. 24 0. (BY MS. THOMPSON) And can you describe for me 25 how that is determined or calculated?

1 So certainly there is consideration given to 2 the water that is available in storage at Elephant 3 Butte and Caballo Reservoirs, and then there is -- you 4 know, we hear a lot about the D1 curve and the D2 5 curve, but there is a determination made as to how 6 much water would need to be released to make the 7 deliveries to the various downstream users, and, of 8 course, the amount that they receive is different from 9 the amount that's released so a calculation needs to 10 be done. 11 0. And for a full allotment to the U.S. lands,

- Q. And for a full allotment to the U.S. lands, have you seen any documentation of the calculation using the 3.024 acre-foot-per-acre number?
 - A. I don't recall.

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- Q. Okay. If we could turn to Joint -- excuse me -- New Mexico Exhibit 2304.
- MS. THOMPSON: My understanding, there's
 no objection to this exhibit, Your Honor, so I'd ask
 -- I'll go ahead and ask a few questions and ask that
 it be admitted.
- Q. (BY MS. THOMPSON) For this letter, Ms.

 Spener, this document is also on IBWC letterhead. Do
 you see that?
 - A. Yes.
 - O. And this document is dated a little more

recently from April, 1979; is that correct?

A. Yes.

- Q. And if you could look at the first paragraph on the first page. I'll go ahead and read it. "The letter is in response to the telephone call from Principal Engineer Bustamonte of your staff on April 2nd in which he referred to the 1906 Water Treaty and kindly asked for a statement describing the manner of determining the reduction in deliveries to Mexico at times of extraordinary drought or serious accident to the irrigation system in the United States as provided in the Treaty." Did I read that correctly?
 - A. Yes.
- Q. Then if we go over to the next page, Page 2, and this letter is -- is, frankly, clearer in the steps that are described here than what we had looked at before, and the first step here describes that, "At the beginning of an irrigation season, a determination is made of the quantity of water in storage available for release in Elephant Butte reservoir and also in Caballo reservoir." Do you see that statement?
- A. Yes.
- Q. And it goes on to describe, "That quantity consists of the total quantity of water in storage in the reservoirs, according to the storage level and

area-capacity data." Do you see that?

A. Yes.

- Q. And there's a brief description of some items that are subtracted out. I don't think I need to read that, but do you see that, as well?
 - A. Yes.
- Q. And then under the second step, it describes then the -- what you described just a minute ago of the losses for delivering the water, and it states, "From the quantity of water available for release from storage, there are deducted the water losses expected in conveying the releases from the storage reservoirs to the Mexican Canal heading and to the lands under the irrigation system in the United States." Did I read that correctly?
 - A. Yes.
- Q. Okay. And then if we go on to the third step
 -- and I won't read this whole item here, but at the
 beginning, it states, "The net remaining waters
 available for delivery are then divided between Mexico
 and the United States, in accordance with the Treaty,
 so that the Treaty allotment to Mexico to be delivered
 at the Mexican Canal, is diminished in the same
 proportion as the full entitlement to lands under the
 irrigation system in the United States is diminished."

Did I read that correctly?

A. Yes.

Q. And, Ms. Spener,

- Q. And, Ms. Spener, when you just described your understanding of how that reduction happens, is it accord in general with those three steps we just mentioned or described in this letter?
- A. Well, I think this certainly has much more detail than my general understanding of the process.
- Q. Did you see anything inconsistent with your understanding?
- A. To the extent that my understanding and description was general, I don't think that you can say that it's consistent or inconsistent.
- Q. The next statement says and gives an example here that, "If deliveries to the U.S. lands are 80 percent of their full entitlement, the delivery to Mexico is 80 percent of its Treaty entitlement." So that would be 80 percent of the 60,000 acre-feet. Again, is that generally accord with your understanding of the reduction?
- A. So that is generally my understanding of a proportional reduction.
- Q. Thank you. And I'll just go over one more sentence of this letter here, which is, "The annual full entitlement for lands in the United States is

1 36.29 inches per acre of land based upon the water requirements in the years of full supply, 1946 through 2 3 1950." Ms. Spener, the -- the number there, 36.29, 4 does that number, do you recognize that number from 5 your evaluations at all of reductions or allocations 6 to Mexico? 7 Α. I don't recall. 8 And -- and that number equivalent -- my 9 understanding is that it's equivalent to that 3.024 I 10 mentioned before. Does that number -- do you 11 understand that number to be used by Bureau of 12 Reclamation when it's determining full supply to U.S. 13 lands? 14 MS. NAJJAR: Objection; foundation. 15 JUDGE MELLOY: If she knows. 16 Α. I have heard that number before, but I'm not 17 certain of how Reclamation currently uses that number. 18 (BY MS. THOMPSON) And if we look over then at Q. 19 the next exhibit, New Mexico 0697, which also has 20 already been admitted, Your Honor. This is the water 21 supply allocation procedures that was testified to 22 before by Ms. Estrada-Lopez. 23 MS. NAJJAR: Objection; outside the 24 scope of direct.

JUDGE MELLOY: Let me -- just a second.

1 What I was going to ask, Ms. Thompson, are you at all 2 close to being done? If not, I think we're going to 3 break because we need to talk about some scheduling 4 issues and exhibits, and we've got some other things 5 to take up. How much longer do you think you'll be. 6 MS. THOMPSON: Your Honor, I probably 7 have at least another 45 minutes, maybe a little bit 8 longer. 9 JUDGE MELLOY: Then we're going to -- I 10 know you'd like to be done tonight, Ms. Spener, but 11 we're going to hold you over to tomorrow and ask you 12 to come back and continue your examination at that 13 time. You can stay on camera or not as you choose. 14 We're going to talk about some -- some issues dealing 15 with scheduling and exhibits. 16 All right. Between Texas and United 17 States, how many witnesses have you actually sent out 18 the binders with the exhibits so far? Which witnesses 19 are you through with actually sending out the binders? 20 MS. NAJJAR: At least three, we believe 21 -- four. I'm sorry. 22 Through Esslinger? JUDGE MELLOY: 23 MS. NAJJAR: Yes. 24 MS. KLAHN: Yes. 25 JUDGE MELLOY: Okay. So I assume you'll be sending out some more tomorrow. What I am going to direct in terms of the --

MS. KLAHN: Your Honor, my team is correcting me that Mr. Sloan, that exhibits for him have already gone out, and also that Mr. -Dr. Blair's will go out in the morning.

JUDGE MELLOY: Does that mean they have not gone out for Blair, Rios, Ivey, Cortez, Balliew, and Miltenberger; is that right?

MS. KLAHN: Correct. Although there aren't any for Mr. Ivey, but yes.

what I'm going to suggest you do is hold off on sending them out first thing in the morning, and as far as the exhibits for the witnesses who have not -- the binders have not been put together, I'm going to direct that if New Mexico wants the U.S. and Texas exhibits included in the binders, they're going to have to advise the United States and Texas by tomorrow as to what those cross-examination exhibits are going to be. I assume that you will know what they are by tomorrow, and if you're not able to advise Texas and United States, then you're going to have to supply them when you -- when you do know what they are, but if you supply them to Texas and the United States by

1 tomorrow, then I will direct the Texas and United States include your designated exhibits that are U.S. 2 3 and Texas exhibits in the binders that they will be 4 mailing out to me. Anything that you add or are 5 unable to designate by -- by tomorrow, I'm going to 6 direct then you're going to have to supply them to me. 7 MS. KLAHN: Your Honor, just to clarify, 8 with the deadline for those additional cross exhibits, 9 if they don't supply them tomorrow, would that remain 10 the same as what it is right now, two days, I think? 11 JUDGE MELLOY: Yes. 12 MS. KLAHN: Okay. Thank you. 13 JUDGE MELLOY: And you can hold off on 14 sending out those binders until you receive that 15 information. 16 MS. KLAHN: Okay. Thank you. 17 JUDGE MELLOY: Okay. A couple other 18 things. One of the paralegals, I believe it was from 19 New Mexico, but I'm not sure, had e-mailed my judicial 20 assistant wanting to compare a list of admitted 21 exhibits so that all the parties will be on the same 22 page, so to speak, as to what's been admitted. Let me 23 tell you what I think we're going to do with exhibits, 24 and if you have a problem with this or think it isn't

going to work, let me know, but what we're going to do

is after each exhibit -- or after each witness completes his or her testimony, we will scan our sheet that shows what we have indicated from the exhibit lists that you supplied to us are admitted or not admitted, and -- and we will e-mail that to you. can then compare your list against our list, and if there are any discrepancies, you can bring it to our attention. At the end of this fall session, what we plan to do is take the daily sheets and then transfer that information to the master exhibit list that each of you have provided to us, and then we will actually file that as a document on the docket to show what exhibits have been admitted during this phase of the Again, encourage you to double-check your list against ours to make sure that -- that we haven't missed anything or incorrectly noted anything, and certainly you're free to bring that to our attention. Any questions about that?

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MS. NAJJAR: No, Your Honor.

MS. KLAHN: No.

pudge Melloy: One other issue about exhibits is in the list that was used for Ms. Estrada-Lopez, there were certain exhibits that were identified as both a U.S. exhibit and a New Mexico exhibit, but from our review, they're not the

Let me just give you an example. One of the exhibits that was listed, and I think it was admitted without objection, is US-380, which we understand from the Box.com filing is 167-page Operations and Maintenance Manual for the Upper Rio Grande Projects. It was represented that New Mexico 265 is the same exhibit, but that's just a four or five-page -- I don't have it right in front of me. I could find it. But it's just a very short exhibit titled, "Rio Grande Rectification Project." I don't know if 265 is part of 380 or whether there's some misunderstanding about what the exhibits are and exhibit numbers, but I would ask that you take a look at that and determine and double-check to make sure that when you were representing that US exhibit or a Texas exhibit with the particular exhibit number is the same as the New Mexico or joint exhibit that they, in fact, are the same documents, because -- that's just one we caught. I don't know if there's others, but that's one we particularly noticed as did not appear to be the same exhibit. Scheduling-wise, so we'll assume that the current witness will be hopefully completed by within roughly an hour tomorrow, including any

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redirect, and then that leaves us with -- let me see

Let me look at the list. Then you'll do 1 2 Mr. Esslinger, which you estimate to be two hours, and 3 what's his -- what's his testimony? 4 MS. KLAHN: That's Texas, Your Honor. 5 He's the manager/treasurer for the Elephant Butte 6 Irrigation District. 7 JUDGE MELLOY: Okay. And from the New 8 Mexico perspective, do you think his cross-examination 9 is going to be lengthy? 10 MS. THOMPSON: Your Honor, we estimate 11 about an hour to an hour and a half of 12 cross-examination. 13 JUDGE MELLOY: Okay. So let's say four 14 hours on the outside, hopefully keep it to three. 15 that would be -- that'd take us through about -- four 16 to five hours tomorrow. So we should be able to get 17 into Dr. King by sometime tomorrow with any -- with 18 any luck, and you're estimating him to be four hours; 19 is that right, Ms. Klahn? 20 I believe so. I'll let MS. KLAHN: 21 Ms. Najjar speak because I think the U.S. is handling 22 Dr. King. 23 JUDGE MELLOY: Ms. Najjar? 24 MS. NAJJAR: Yes, Your Honor, I believe 25 four hours is correct.

1 JUDGE MELLOY: And what about the cross 2 on him, do you think that's going to be lengthy? 3 assume it'll be. MS. THOMPSON: Your Honor, New Mexico 4 5 has reserved all cross for Dr. King and Dr. Blair so 6 there will be no cross, so we should be able to get to 7 that quite fast. 8 Okay. All right. JUDGE MELLOY: So 9 then that means by Thursday, we should be into 10 Mr. Sloan and maybe even through Mr. Blair, with any 11 luck. 12 MS. KLAHN: I think what we're going to 13 do, Your Honor, is have Mr. Ivey out of order on 14 Thursday afternoon, probably as the last witness that 15 day, and then start Dr. Blair on Monday because his 16 testimony will be several hours, and we expect -- we 17 just didn't want to break it up. 18 JUDGE MELLOY: Okay. All right.

JUDGE MELLOY: Okay. All right. Well, that then -- that's a good segue into my last point I want to talk about, which is the schedule. I had indicated when we established the schedule for the -- for this session that my current intention was to hold court on the holiday, and Monday is a federal holiday. My -- my intention is still to do that, but I wanted to make sure that that didn't cause any problems for

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1 anyone. You know, as -- as someone mentioned 2 yesterday, I assume everybody is working pretty much 3 seven days a week anyway, so I'm not -- so I'm not --4 I'm not sure anybody would be taking Monday off in any 5 event. My only -- my only reservation, and I'll --6 and I don't think it's going to be a problem -- is we 7 had some technical issues yesterday. I think we got those all worked out, and assuming things go smoothly 8 9 the next couple days, I don't have any big problem 10 with going ahead on Monday. We will probably be 11 somewhat limited in our IT support with the courthouse 12 closed down and -- and so on so if -- if we start to 13 have a lot of technical problems, that may be an 14 But does anybody have a problem with going 15 forward on Monday? 16 MS. THOMPSON: No, Your Honor. 17 MS. KLAHN: No, Your Honor. 18 MS. NAJJAR: No, Your Honor. 19 JUDGE MELLOY: All right. Well, then 20 we'll plan on that unless we start to some technical 21 problems, but I think we got that worked out. 22 Anything else we need to talk about 23 If not, we'll -- we'll be adjourned. See you today? 24 tomorrow morning. Thank you, everyone. 25 MS. KLAHN: Thank you.

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1	MS. THOMPSON: Thank you.
2	(The proceedings adjourned at 5:19 p.m.)
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1 CERTIFICATE 2 3 I, HEATHER L. GARZA, a Certified 4 Shorthand Reporter in and for the State of Texas, do 5 hereby certify that the facts as stated by me in the 6 caption hereto are true; that the foregoing pages 7 comprise a true, complete and correct transcript of the proceedings had at the time of the hearing. 8 9 I further certify that I am not, in any 10 capacity, a regular employee of any of the parties in 11 whose behalf this status hearing is taken, nor in the 12 regular employ of any of the attorneys; and I certify 13 that I am not interested in the cause, nor of kin or 14 counsel to any of the parties. 15 16 GIVEN UNDER MY HAND AND SEAL OF 17 on this, the 7th day of December, 2021. 18 19 HEATHER L. GARZA, CSR, RPR, CRR 2.0 Certification No.: 8262 Expiration Date: 04-30-22 21 22 23 Worldwide Court Reporters, Inc. Firm Registration No. 223 24 3000 Weslayan, Suite 235 Houston, TX 77027

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